Technical Manual

(MDSR-DVR)

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1. Installation of MDSR DVR

This manual includes details on

Appearance and name of MDSR DVR,
how to connect PAN/TILT control with related tools
and how to setup the program of system.

If you are First user of MDSR DVR, even though you are experienced with similar products like this, we recommend you read this manual carefully and follow the instructions inside before using this product.

Before using MDSR DVR, you should contact where you purchased and get a support, in case you open the cover for upgrading of system or repair. If you have any questions or problem, contact where you purchased.

1.1. Safety Information

- Before installation, be sure to turn off the power of MDSR DVR.
- Do not open the cover of product at your disposal.
- Install the product to a well-ventilated area.
- Keep about 20 Cm distance with other products.
- Do not install the product where extreme electronic wave or magnetism exit.
- If the product is installed near the wireless devices like radio or TV, it may cause interference.
- Do not expose the product directly to the sun or heating apparatus.
- Do not expose the product to rain, extremely humid or dirt environment. It might caus malfunction of System. Install dehumidifier and use compressed air for cleaning filte every 3 months. Cleaning every fan, major parts of system inside.
- Re-insert front filter after Cleaning & drying it every 3 months.
- Keep the product away from tremor or any magnetic devices.
- Do not install the product to extremely cold area.
- Pay attention not to slip an electronic conductor into the groove of the product for ventilation.

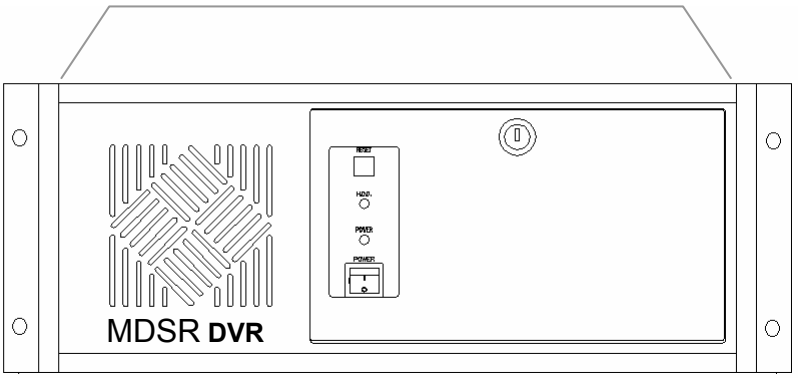
- Correctly adjust the input voltage switch of power supply according to your environment.
- Use stable Transformer to protect malfunction of system, where expected unstable power supply.
- When you install, put another support for BNC cable, not to damage BNC Board. it might be damaged by the weight of BNC cable.

1.2. Removing Package

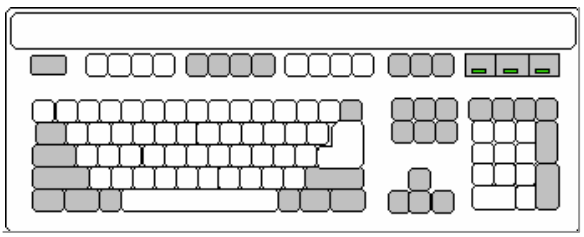
After removing MDSR DVR package , place MDSR DVR where you want to install. (Read carefully safety information before installation)

Make sure that the following contents before start install.

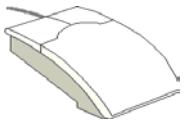
- Body (MDSR DVR)
- A power supply cable
- User's Manual
- Keyboard, Mouse
- Case accessory Box
- Microsoft Windows 2000 License
- Communication conversion cable(Receiver connecting cable)



Body (MDSR DVR)



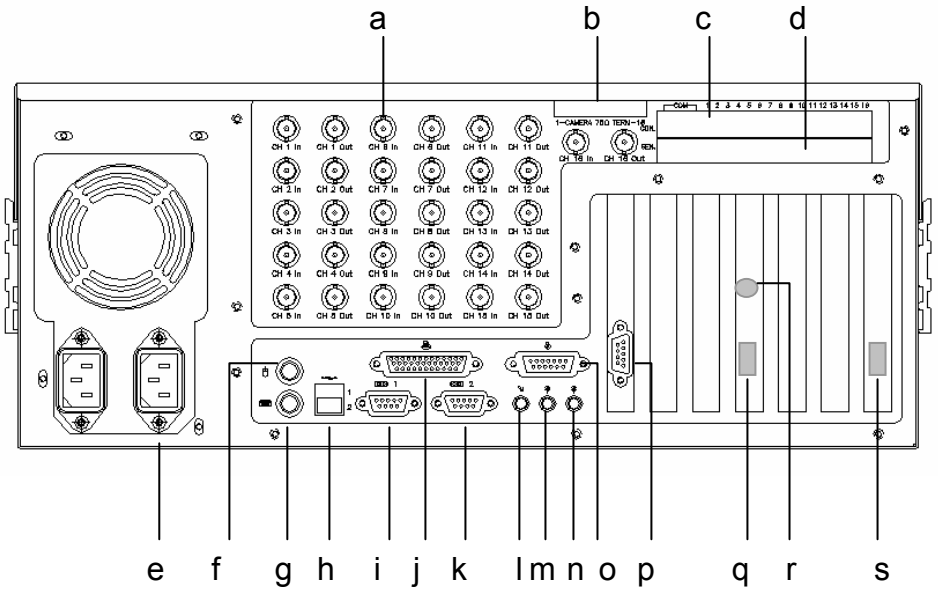
Keyboard



Mouse

Power supply Cable (for AC)

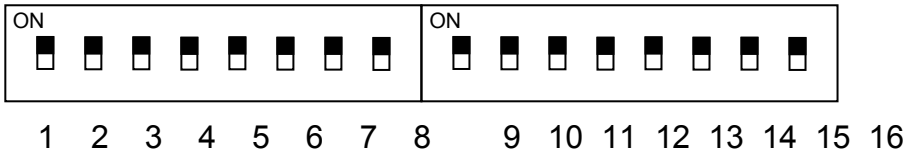
1.3. Rear Panel of System



a. Camera Input (CH1~CH16) / Output (CH1~CH16)
b. Camera 75Ohm Terminator
c. Control Output (Com:4port, Control:16port)
d. Sensor Input (Com:4port, Sensor:16port)
e. AC Power Input (AC 110 ~ 220V)
f. PS/2 Mouse Port
g. PS/2 Keyboard Port
h. USB Port
i. Com A Serial Port
j. LPT(Printer) Port
k. Com B Serial Port
l. Line Out 1
m. Line In / Line Out2
n. MIC In
o. Game Port
p. VGA Out
q. TV Out (Composite Out)
r. RS422/485 (RX Connection Port)
s. LAN Port

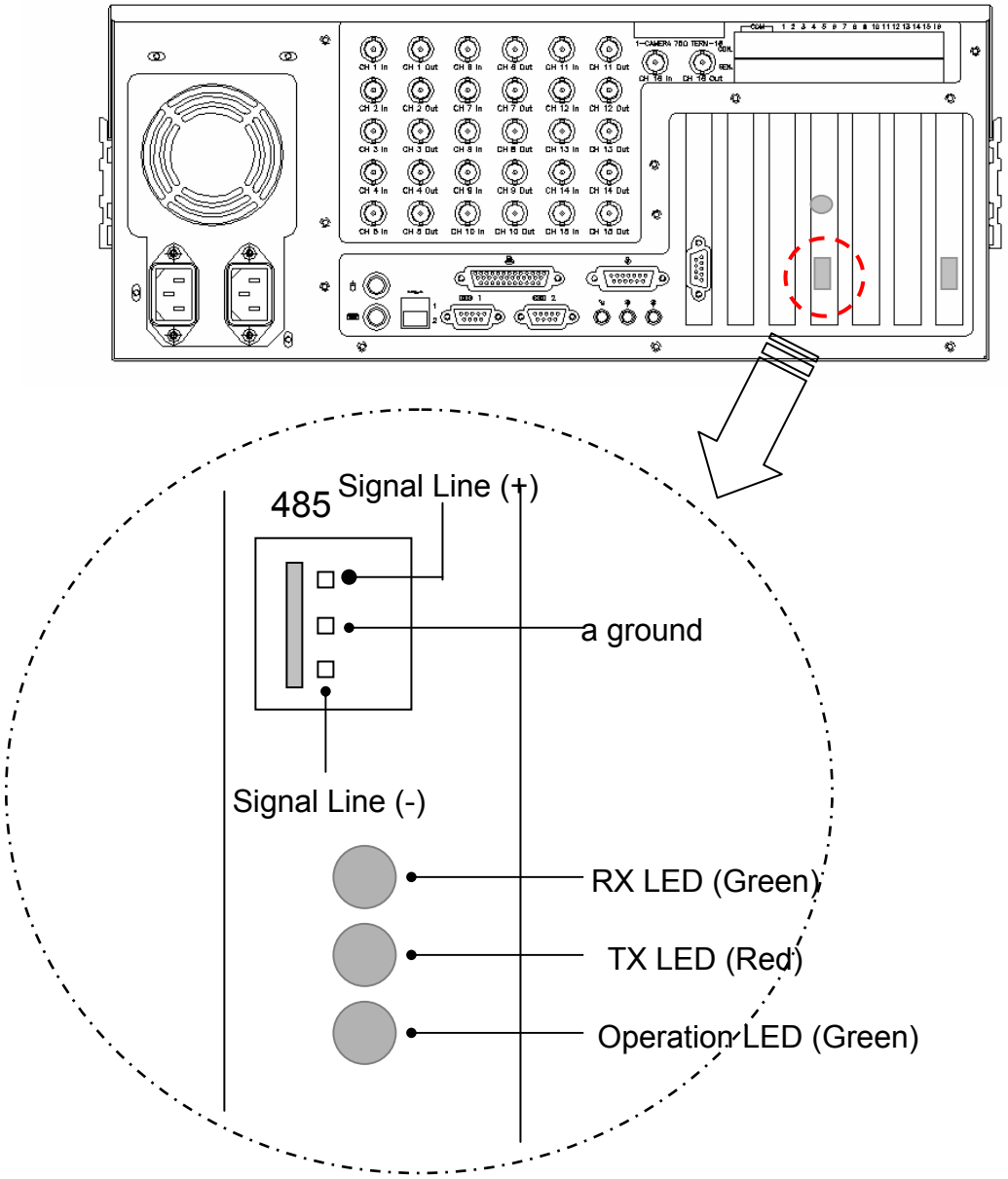
1.4. Camera 75 Ohm Terminator

This system can connected to CCTV 16 channel input with one by one Loopback. Use output port of each channel.



All the channel set as ‘On’, when it is released from warehouse.
Set ‘On’ all the channel when you don’t use CCTV.
About the channel which will be used by CCTV, set the switch ‘Off’ like above picture.
Turn the switch ‘On’ when you don’t use CCTV.

1.4. How to Connect to PAN/TILT Camera

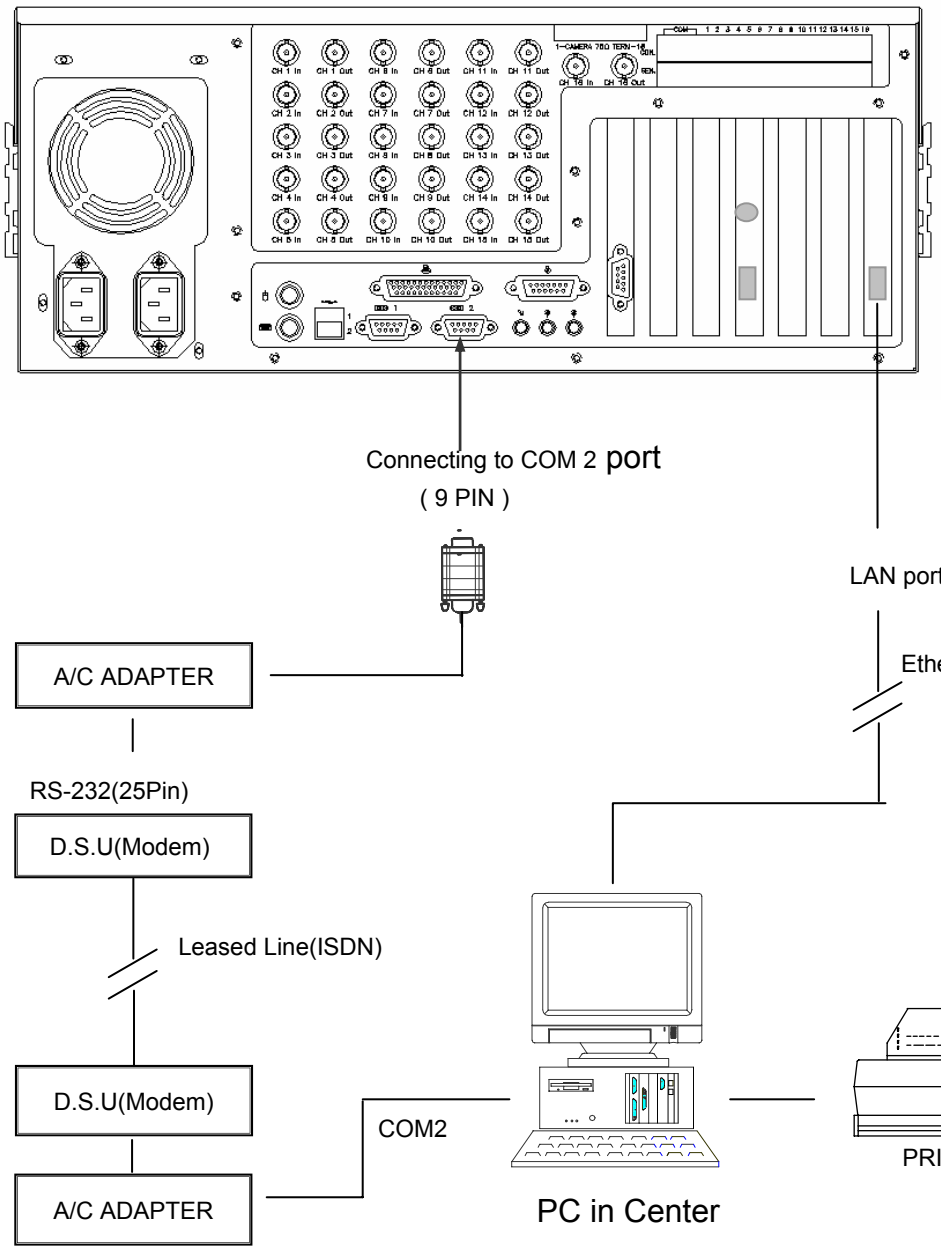


- Connect to PAN/TILT Receiver (RS-485 Signal line)

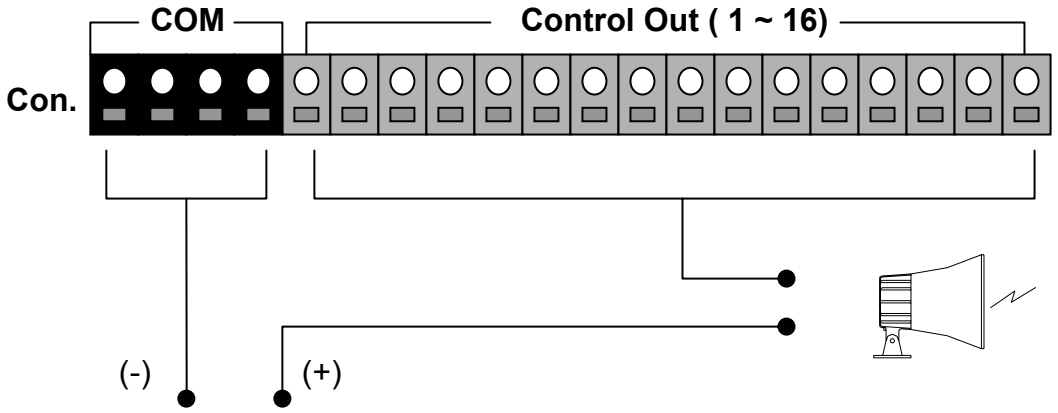
- Only when Operation LED is 'On' stat
image appears normally.

- Caution : When connect, pay attention (+), (-) polarity of signal line

1.5. How to Connect to PSTN, ISDN, Leased line & LAN



1.6. Connecting Control Output



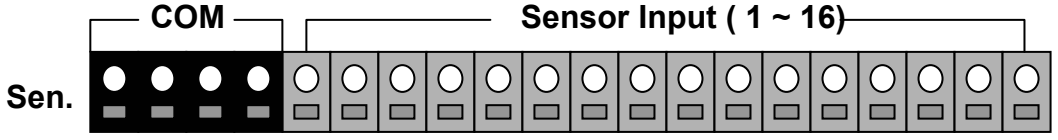
External Power Supply (DC 12V) Siren, Alarm, Outside relay

When it is controlled automatically or activated by motion or sensor, control output port (You can control at “Settings – Sensor & Output Setup”) connect to the “COM” port .

- Maintained “NO(Normal Open)” at normal time.
- Maintained “NC(Normal Close)” at control output Time.

Only use below 12V, 300mA voltage. When you control electric lamp and other devices, use another outer relay control.

1.7. Connecting Outer Sensor



Connect one signal line of all kind of sensor(infrared rays sensor, thermic rays sensor, Magnetic sensor) to the com port of the body and connect another signal line to the desired sensor number.

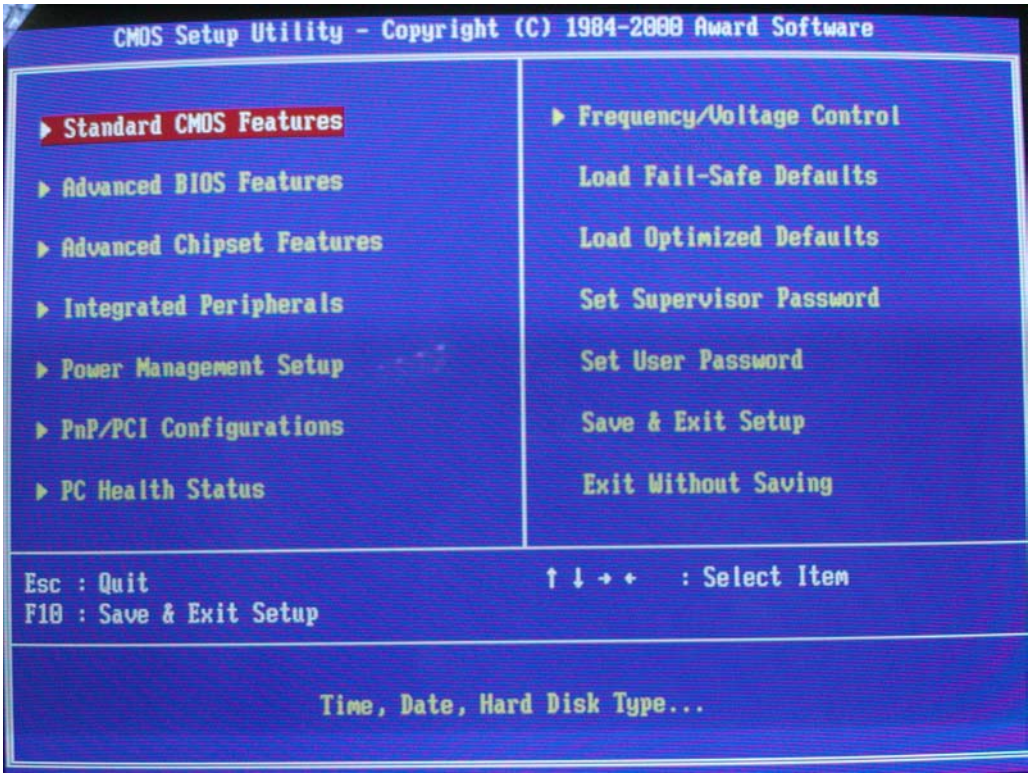
- Set the type of sensor at “Sensor & Output Setup”.

Use another adapter(Power Supply) for the all sorts of sensor’s power supply.

2. Installation Guide

This chapter explains a proper activation of MDSR DVR, how to add HDD and other basic system setup.

2.1. CMOS Setup

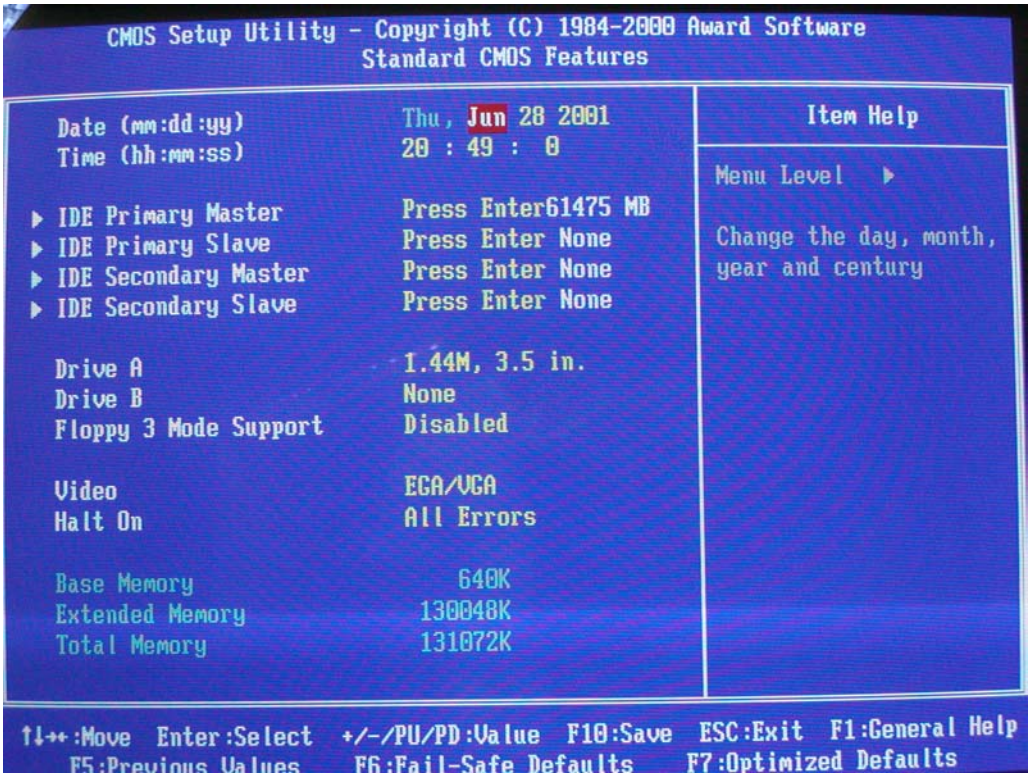


Initial screen of CMOS Setup

To see the screen like above, turn it on the MDSR -DVR Power Switch then 'Del' key on keyboard. After a seconds, initial CMOS setup screen be displayed like figure {2-1], Select 'Load Optimized Defaults' out of menu. This sets your system basically optimized status. On your optimized system, set the function as following pictures.

2.1.1. Standard CMOS Features

Set the basic information of HDD.


CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
Standard CMOS Features
Date (mm:dd:yy) Thu, Jun 28 2001
Time (hh:mm:ss) 20 : 49 : 0
IDE Primary Master Press Enter61475 MB
IDE Primary Slave Press Enter None
IDE Secondary Master Press Enter None
IDE Secondary Slave Press Enter None
Drive A 1.44M, 3.5 in.
Drive B None
Floppy 3 Mode Support Disabled
Video EGA/VGA
Halt On All Errors
Base Memory 640K
Extended Memory 130048K
Total Memory 131072K
Item Help
Menu Level ▶
Change the day, month, year and century
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Standard CMOS Features

* **Primary Master / Primary Slave, Secondary Master / Secondary Slave**

  Can use 4 IDE type HDD. Because it delivered 1 HDD from warehouse Except Primary Master, rest of HDD type is set “None”.

  To add additional HDD set “Auto” type then when your PC reboots, HDD sets automatically.

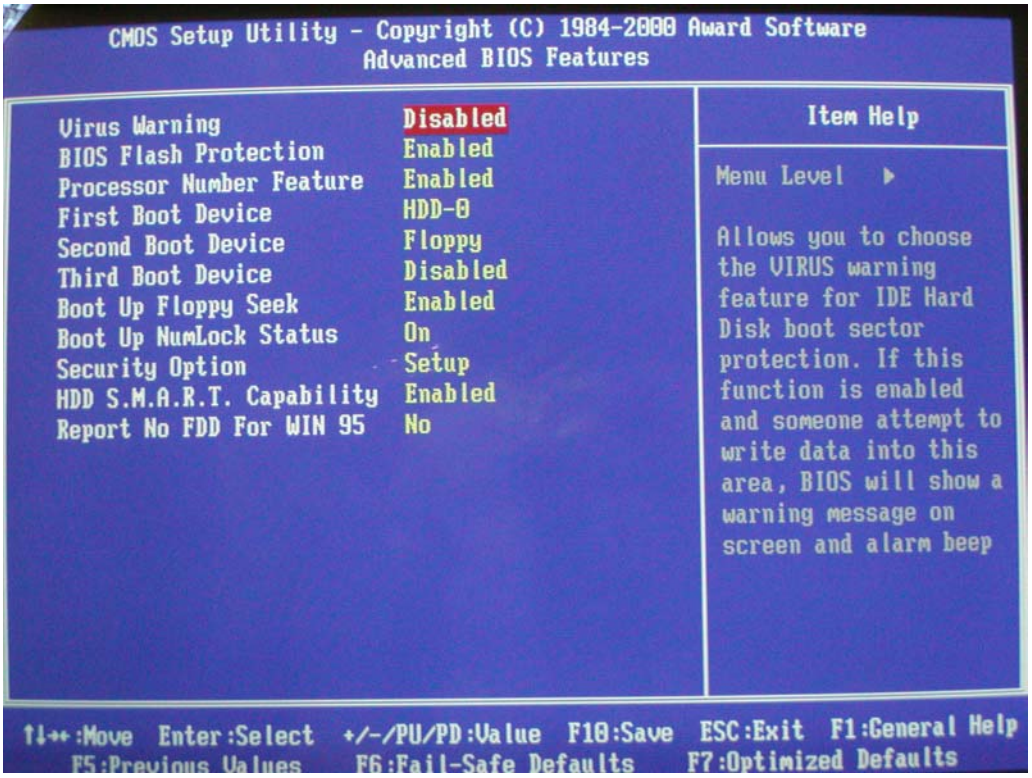
* **Halt On**

  Set when your system will be halt on if it detects unexpected error.

  - All Errors : System will be halt on every kind of error.

2.1.2. Advanced BIOS Features

Set the function of advanced BIOS.


CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
Advanced BIOS Features
Virus Warning Disabled
BIOS Flash Protection Enabled
Processor Number Feature Enabled
First Boot Device HDD-0
Second Boot Device Floppy
Third Boot Device Disabled
Boot Up Floppy Seek Enabled
Boot Up NumLock Status On
Security Option Setup
HDD S.M.A.R.T. Capability Enabled
Report No FDD For WIN 95 No
Item Help
Menu Level ▶
Allows you to choose the VIRUS warning feature for IDE Hard Disk boot sector protection. If this function is enabled and someone attempt to write data into this area, BIOS will show a warning message on screen and alarm beep
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Advanced BIOS Features

* **BIOS Flash Protection**

  Set write protect on Flash BIOS.

* **First / Second / Third Boot Device**

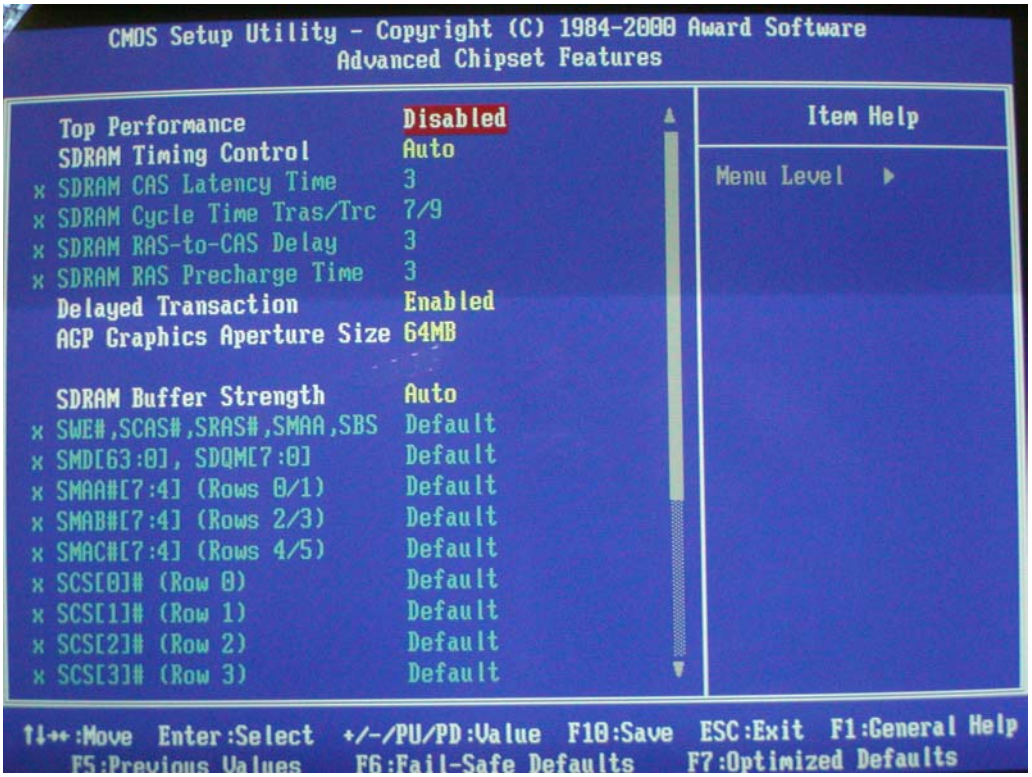
  Set the order of booting disk.

* **HDD S.M.A.R.T. Capability**

  S.M.A.R.T. (Self Monitoring, Analysis, Reporting Technology) has the function of keeping the most suitable status of DATA with watching and analyzing the System.

2.1.3. Advanced Chipset Features

Set the advanced chipset function.

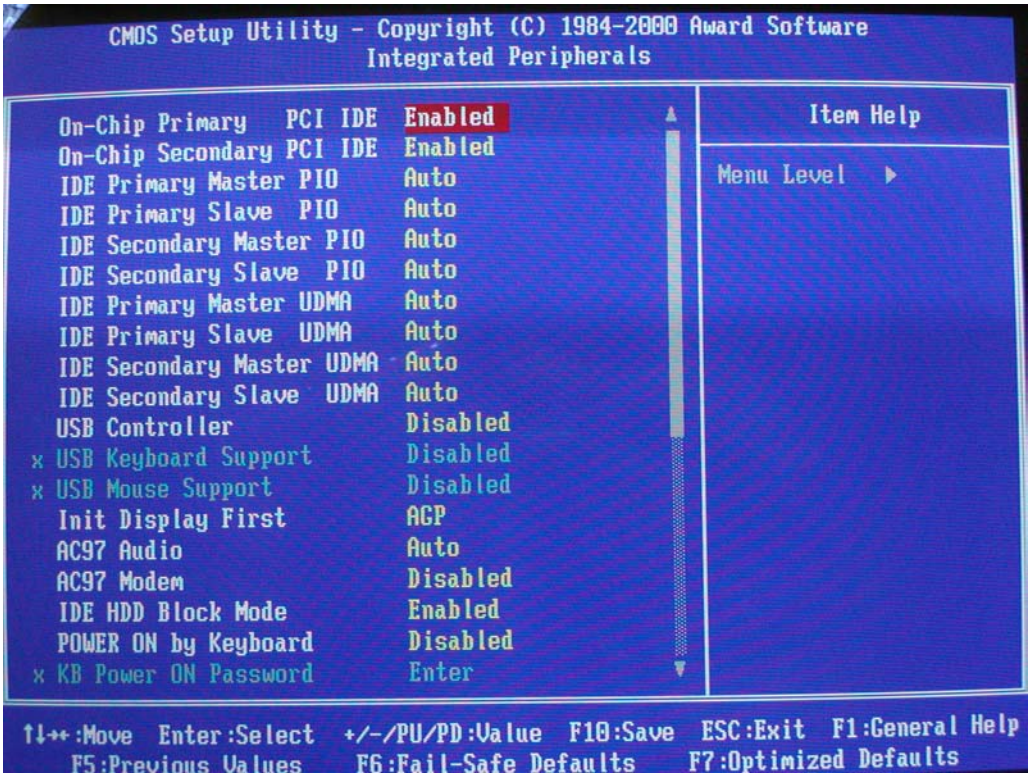

CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
Advanced Chipset Features
Top Performance Disabled
SDRAM Timing Control Auto
x SDRAM CAS Latency Time 3
x SDRAM Cycle Time Tras/Trc 7/9
x SDRAM RAS-to-CAS Delay 3
x SDRAM RAS Precharge Time 3
Delayed Transaction Enabled
AGP Graphics Aperture Size 64MB
SDRAM Buffer Strength Auto
x SWE#,SCAS#,SRAS#,SMAA,SBS Default
x SMD[63:0], SDQM[7:0] Default
x SMAA#[7:4] (Rows 0/1) Default
x SMAB#[7:4] (Rows 2/3) Default
x SMAC#[7:4] (Rows 4/5) Default
x SCS[0]# (Row 0) Default
x SCS[1]# (Row 1) Default
x SCS[2]# (Row 2) Default
x SCS[3]# (Row 3) Default
Item Help
Menu Level
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Advanced Chipset Features

Keep the default value on this menu.

2.1.4. Integrated Peripherals

Set the formation of IDE and other peripherals.


CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
Integrated Peripherals
On-Chip Primary PCI IDE Enabled
On-Chip Secondary PCI IDE Enabled
IDE Primary Master PIO Auto
IDE Primary Slave PIO Auto
IDE Secondary Master PIO Auto
IDE Secondary Slave PIO Auto
IDE Primary Master UDMA Auto
IDE Primary Slave UDMA Auto
IDE Secondary Master UDMA Auto
IDE Secondary Slave UDMA Auto
USB Controller Disabled
x USB Keyboard Support Disabled
x USB Mouse Support Disabled
Init Display First AGP
AC97 Audio Auto
AC97 Modem Disabled
IDE HDD Block Mode Enabled
POWER ON by Keyboard Disabled
x KB Power ON Password Enter
Item Help
Menu Level
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Integrated Peripherals

*** USB Controller**

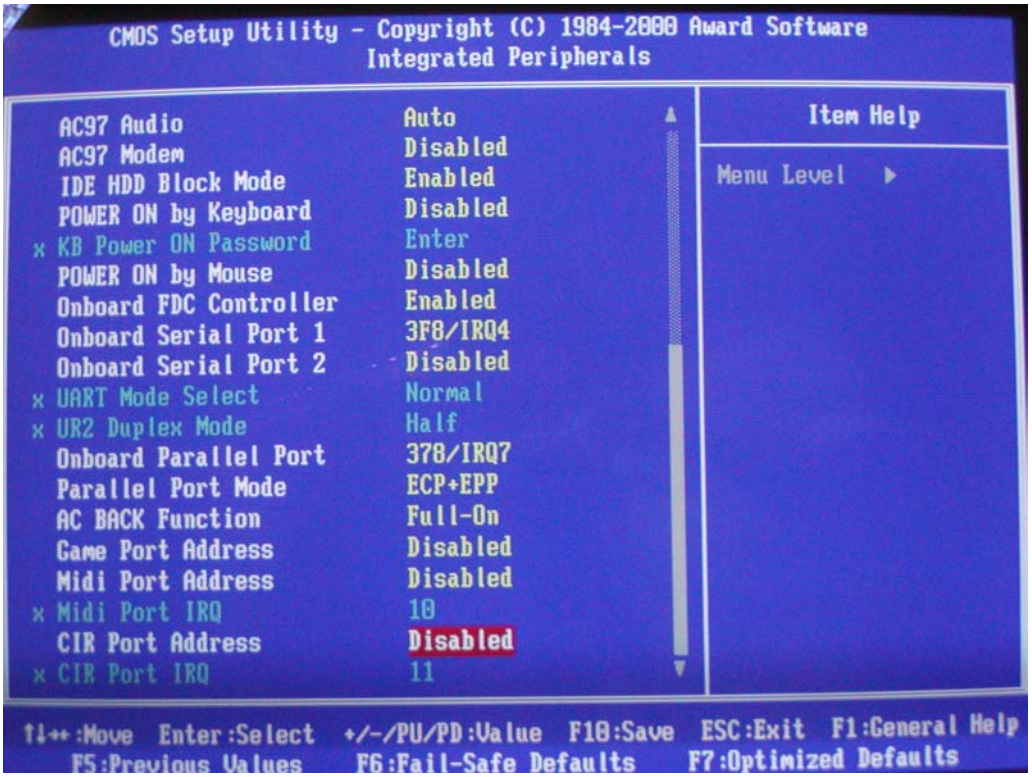
Select whether you use USB controller or not.

*** Init Display First**

Select pre-selected slot when you use AGP, PCI, ISA and ISA VGA Card together on your system.

*** AC97 Modem**

Select whether you use built-in modem card or not.


CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
Integrated Peripherals
AC97 Audio Auto
AC97 Modem Disabled
IDE HDD Block Mode Enabled
POWER ON by Keyboard Disabled
x KB Power ON Password Enter
POWER ON by Mouse Disabled
Onboard FDC Controller Enabled
Onboard Serial Port 1 3F8/IRQ4
Onboard Serial Port 2 Disabled
x UART Mode Select Normal
x UR2 Duplex Mode Half
Onboard Parallel Port 378/IRQ7
Parallel Port Mode ECP+EPP
AC BACK Function Full-On
Game Port Address Disabled
Midi Port Address Disabled
x Midi Port IRQ 10
CIR Port Address Disabled
x CIR Port IRQ 11
Item Help
Menu Level
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Integrated Peripherals

* **Onboard Serial Port 1 / 2**

  Set the address of built-in serial port manually or automatically.

* **Onboard Parallel Port**

  Set the address of built-in parallel port manually or automatically.

* **Parallel Port Mode**

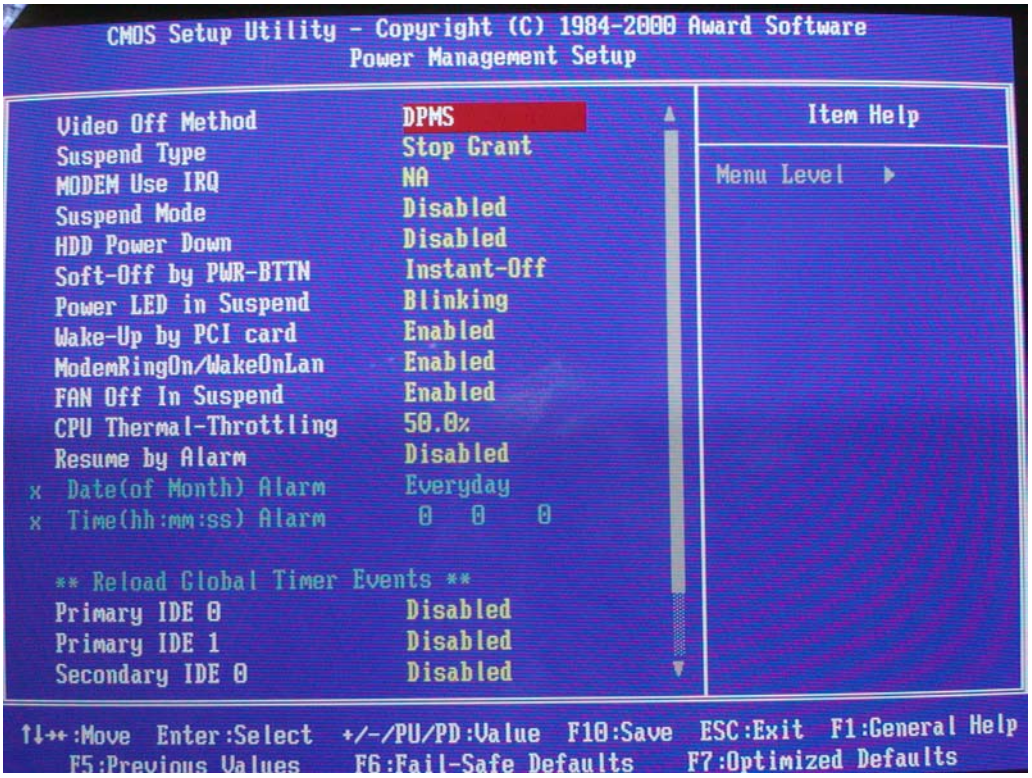
  Set the port of printer.

* **AC Back Function**

  Select the power on/off and last status when a power supplies again after power failure.

2.1.5. Power Management Setup

Set the power management of System.


CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
Power Management Setup
Video Off Method DPMS
Suspend Type Stop Grant
MODEM Use IRQ NA
Suspend Mode Disabled
HDD Power Down Disabled
Soft-Off by PWR-BTTN Instant-Off
Power LED in Suspend Blinking
Wake-Up by PCI card Enabled
ModemRingOn/WakeOnLan Enabled
FAN Off In Suspend Enabled
CPU Thermal-Throttling 50.0%
Resume by Alarm Disabled
x Date(of Month) Alarm Everyday
x Time(hh:mm:ss) Alarm 0 0 0
** Reload Global Timer Events **
Primary IDE 0 Disabled
Primary IDE 1 Disabled
Secondary IDE 0 Disabled
Item Help
Menu Level
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

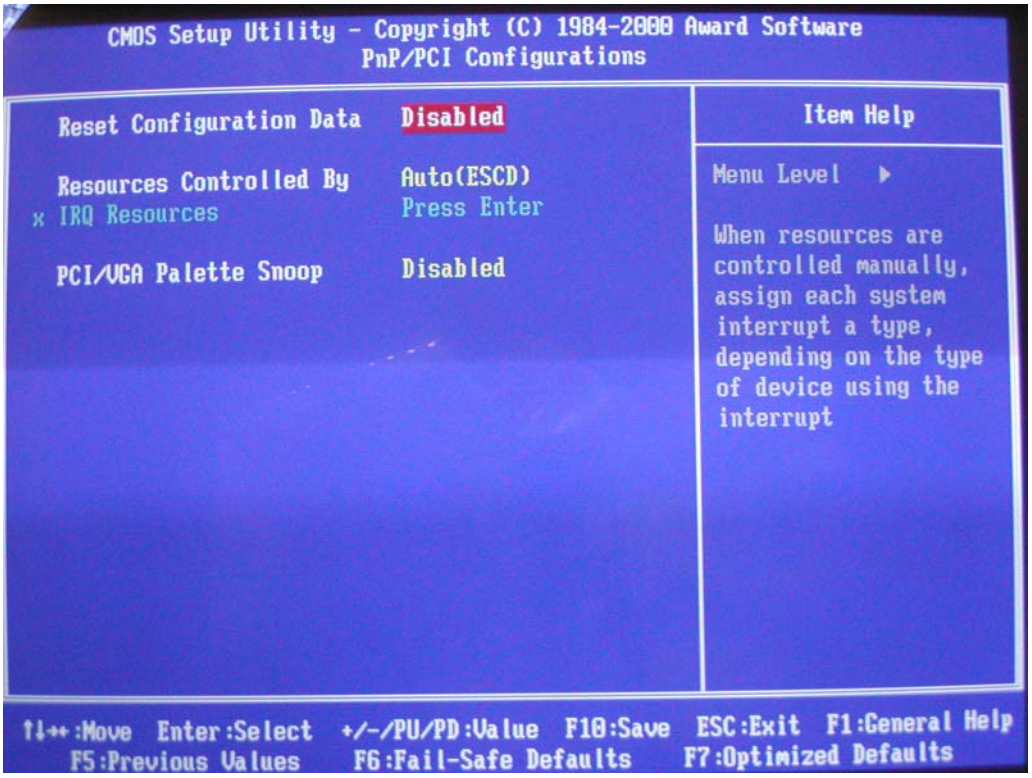
Integrated Peripherals

*** Modem Use IRQ**

Set the IRQ for modem.

2.1.6. PnP/PCI Configuration Setup

Set the value of IRQ of PCI, ISA devices.

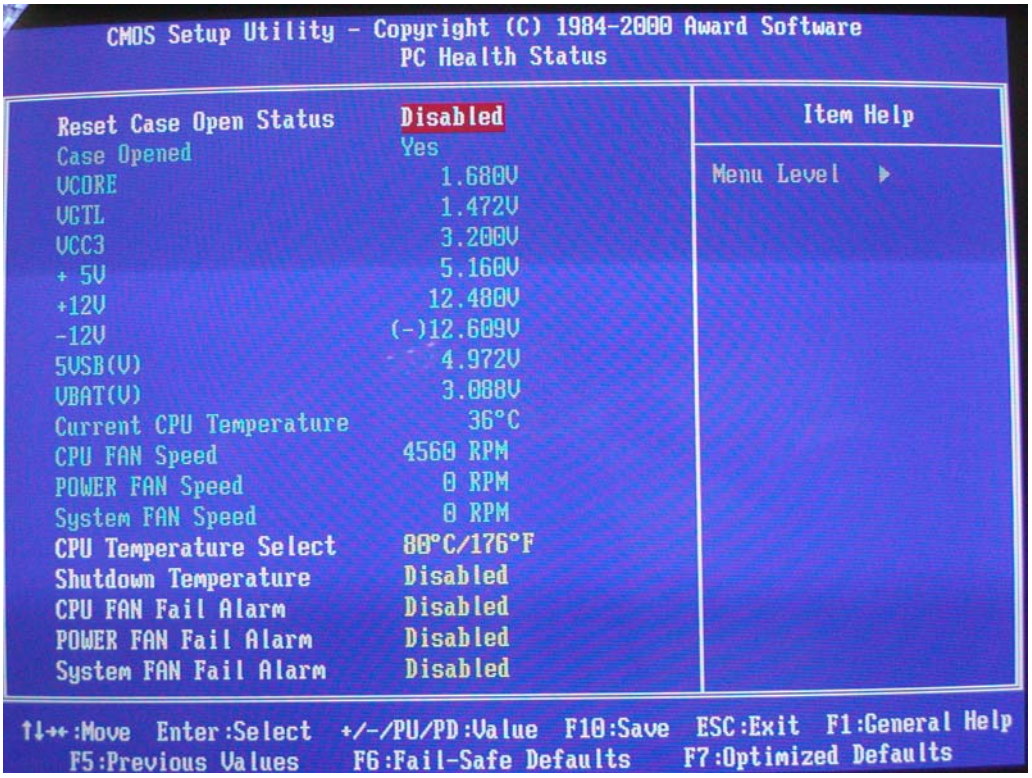

CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
PnP/PCI Configurations
Reset Configuration Data
Disabled
Resources Controlled By
Auto(ESCD)
x IRQ Resources
Press Enter
PCI/VGA Palette Snoop
Disabled
Item Help
Menu Level ▶
When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

PnP/PCI Configuration Setup

Keep the default value on this menu.

2.1.7. PC Health Status

Shows the inside of PC hardware.

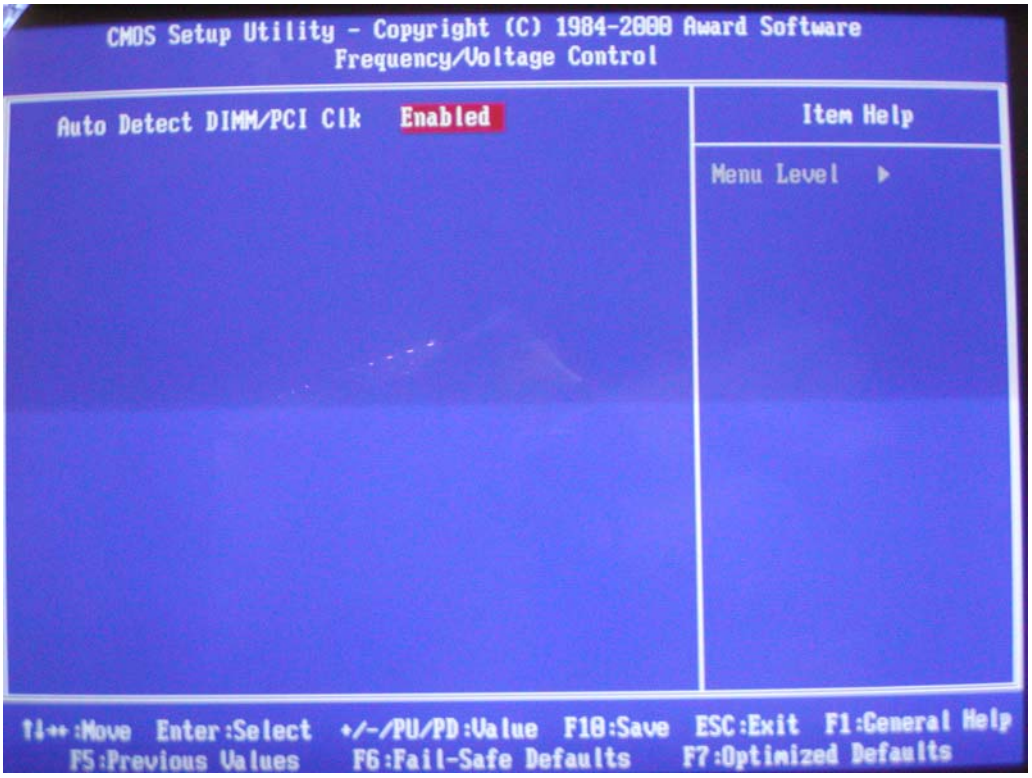


PC Health Status

Keep the default value on this menu.

2.1.8. Frequency / Voltage Control

Set the Ratio of CPU.


CMOS Setup Utility - Copyright (C) 1984-2000 Award Software
Frequency/Voltage Control
Auto Detect DIMM/PCI Clk
Enabled
Item Help
Menu Level
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

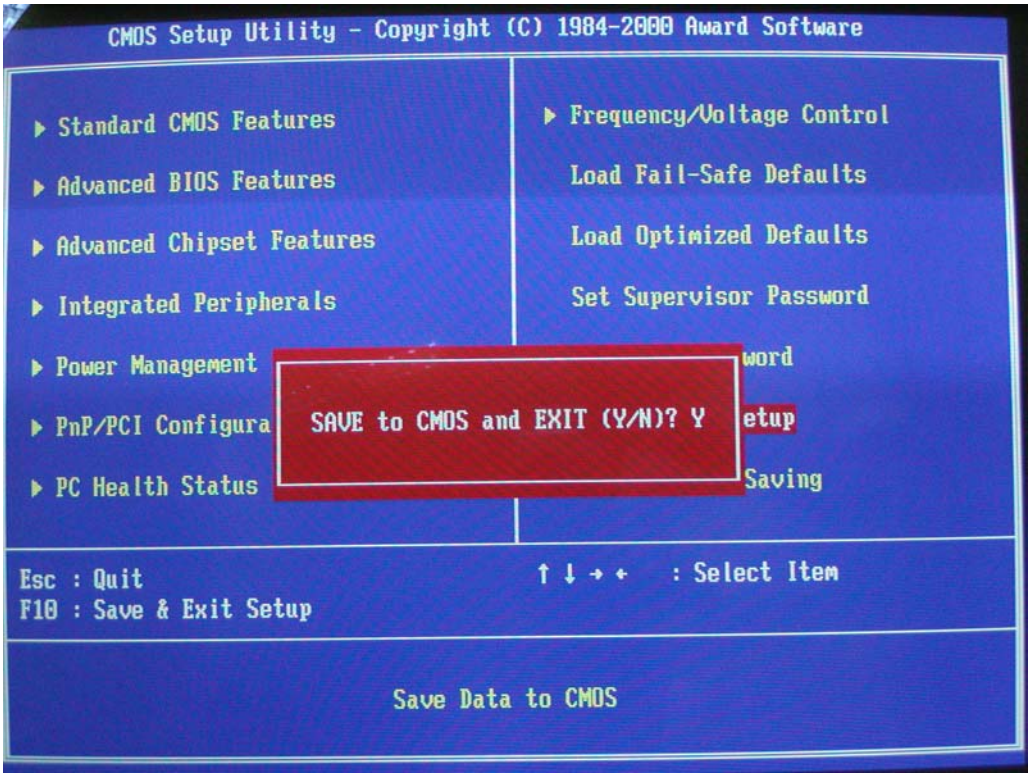
Frequency/Voltage Control

* **Auto Detect DIMM/PCI Clk**

  Set DIMM/PCI Clk automatically.

2.1.9. Save & Exit Setup

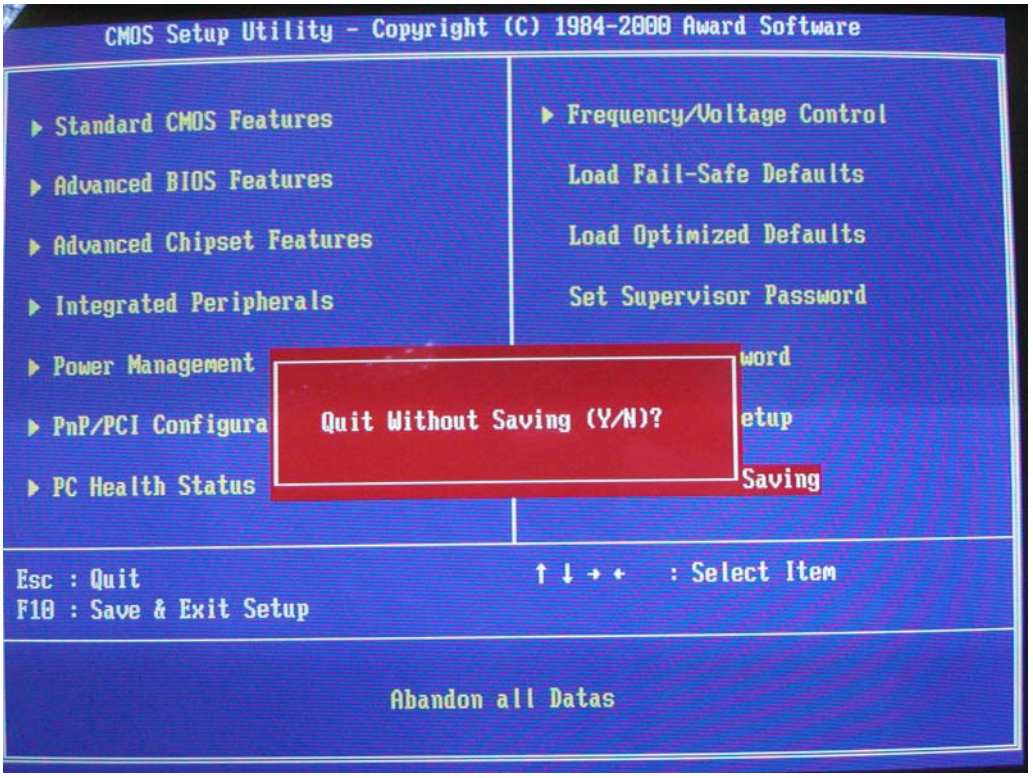
Save the changed value, exit Setup program.



Save & Exit Setup

2.1.10. Exit Without Saving

Exit Setup program without Saving.



Exit Without Saving

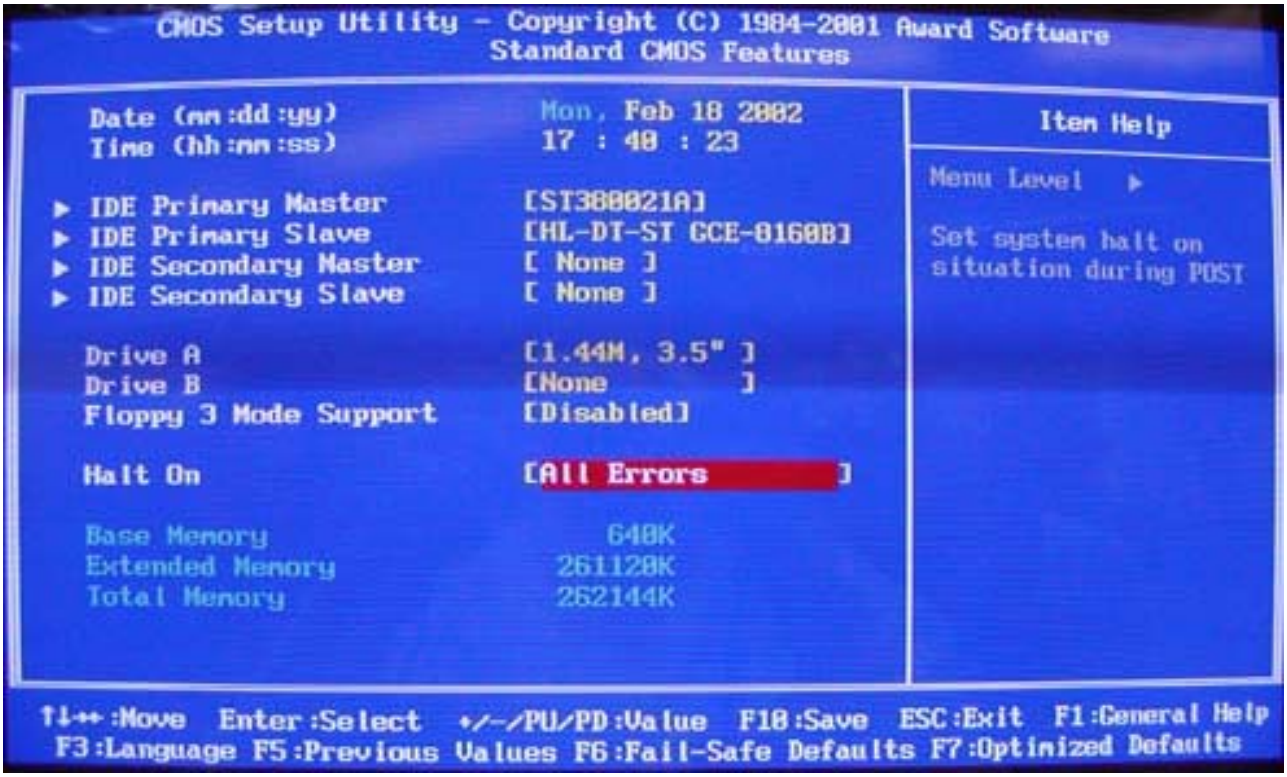
2.2. CMOS Setup(Pentium-4)

Initial CMOS Setup

Power on MDSR -DVR and press DEL key for CMOS setup screen like [Figure 2-2-1]. Select ‘Load Optimized Defaults’ on the menu. Performing this function makes your system as optimized setting. Set your system function properly on basically optimized state. Set the function as following steps.

2.2.1. Standard CMOS Features

General H/W setup.


CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
Standard CMOS Features
Date (mm:dd:yy) Mon, Feb 18 2002
Time (hh:mm:ss) 17 : 40 : 23
IDE Primary Master [ST380021A]
IDE Primary Slave [HL-DT-ST GCE-8160B]
IDE Secondary Master [None]
IDE Secondary Slave [None]
Drive A [1.44M, 3.5"]
Drive B [None]
Floppy 3 Mode Support [Disabled]
Halt On [All Errors]
Base Memory 640K
Extended Memory 261120K
Total Memory 262144K
Item Help
Menu Level ▶
Set system halt on situation during POST
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F3:Language F5:Previous Values F6:Fail-Safe Defaults F7:Optinized Defaults

Standard CMOS SETUP

*** Primary Master / Primary Slave, Secondary Master / Secondary Slave**

4 additional HDD(IDE type) available.

Because 1 HDD installed in your system, rest HDD set as 'NONE' except Primary Master. Additional HDD will be automatically added when you system boots. To do this, set the rest of HDD type as 'Auto'.

*** Halt on**

Check Halt on menu as 'All errors'.

2.2.2. BIOS Features SETUP

Set advanced BIOS function

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
Advanced BIOS Features
BIOS Flash Protection [Auto]
First Boot Device [HDD-0]
Second Boot Device [Floppy]
Third Boot Device [Disabled]
Boot Up Floppy Seek [Disabled]
BootUp Num-Lock [On]
Password Check [Setup]
Interrupt Mode [PIC]
MPS Version for OS 1.4
HDD S.M.A.R.T. Capability [Enabled]
Full Screen LOGO Show [Disabled]
Iten Help
Menu Level ▶
[APIC]
More interrupt can be used under OS that supports APIC function
Warning: Once OS is installed in [APIC], system can't boot to OS when [PIC] is set
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F3:Language F5:Previous Values F6:Fail-Safe Defaults F7:Optinized Defaults

BIOS Features SETUP

*** 1st / 2nd / 3rd Boot Device**

Set the order for booting devices

*** Interrupt Mode**

PIC : minimize interrupt and error

Set interrupt mode as 'PIC'

*** HDD S.M.A.R.T. Capability**

S.M.A.R.T. (Self Monitoring, Analysis, Reporting Technology) has the function that HDD analyze status of system and keep the best data keeping condition.

*** Full Screen Logo show**

check whether you want to show logo screen when system boots.

set this menu as 'Disable'

2.2.3. Advanced Chipset Features SETUP

Set advanced Chipset function

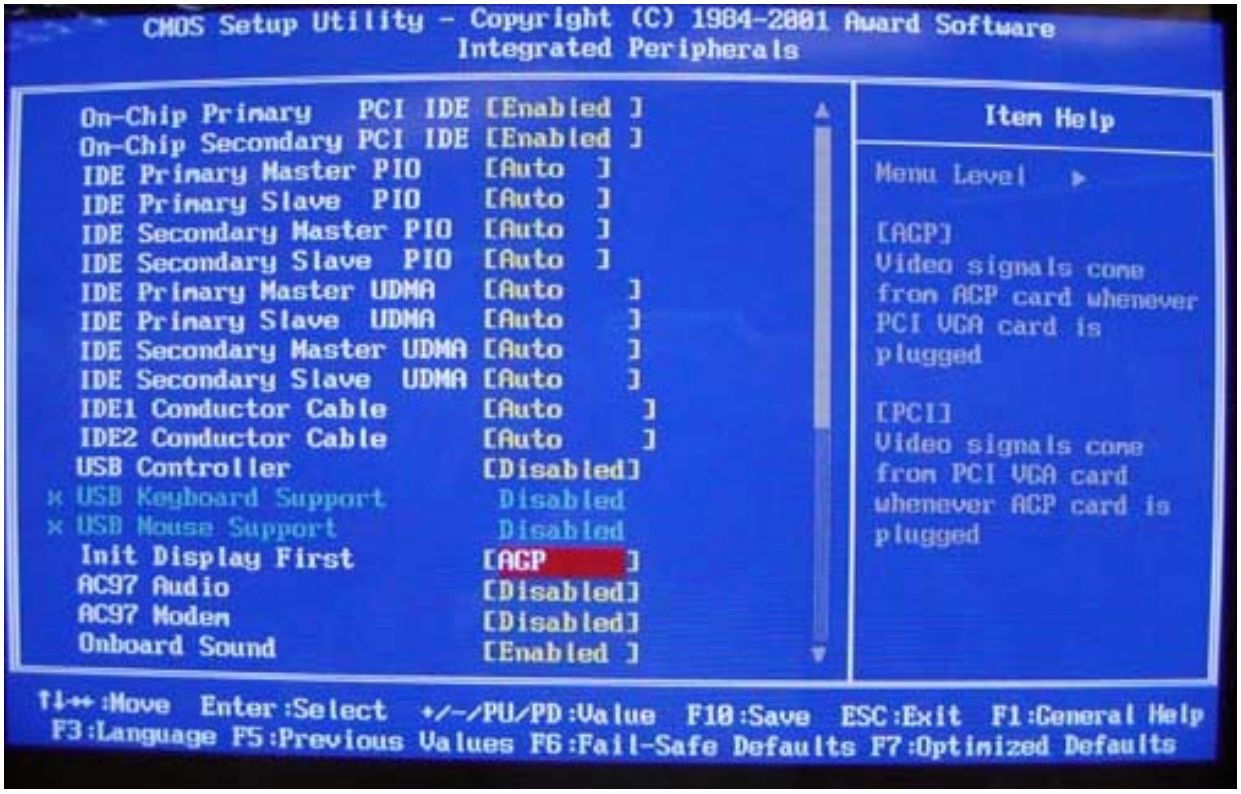
CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
Advanced Chipset Features
Configure DRAM Timing [SPD]
x CAS Latency Time 2.5
x Active to Precharge Delay 6
x DRAM RAS# to CAS# Delay 3
x DRAM RAS# Precharge 3
x Refresh Mode Select 7.8 usec
DRAM Data Integrity Mode Non-ECC
DRAM Read Thermal Mgnt [Disabled]
Delayed Transaction [Enabled]
AGP Aperture Size (MB) [64]
Delay Prior to Thermal [16 Min]
Item Help
Menu Level ▶
[SPD]
Configure DRAM Timing by DRAM SPD data
[Manual]
Configure DRAM Timing manually
Warning: wrong DRAM Timing may make system can't boot. Clear CMOS to overcome wrong Timing issue
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F3:Language F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Advanced Chipset Features SETUP

*** Leave this setup as default.**

2.2.4. Integrated Peripherals

Set IDE & peripheral devices.


CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
Integrated Peripherals
On-Chip Primary PCI IDE [Enabled]
On-Chip Secondary PCI IDE [Enabled]
IDE Primary Master PIO [Auto]
IDE Primary Slave PIO [Auto]
IDE Secondary Master PIO [Auto]
IDE Secondary Slave PIO [Auto]
IDE Primary Master UDMA [Auto]
IDE Primary Slave UDMA [Auto]
IDE Secondary Master UDMA [Auto]
IDE Secondary Slave UDMA [Auto]
IDE1 Conductor Cable [Auto]
IDE2 Conductor Cable [Auto]
USB Controller [Disabled]
x USB Keyboard Support Disabled
x USB Mouse Support Disabled
Init Display First [AGP]
AC97 Audio [Disabled]
AC97 Moden [Disabled]
Onboard Sound [Enabled]
Item Help
Menu Level ▶
[ACP]
Video signals come from ACP card whenever PCI VGA card is plugged
[PCI]
Video signals come from PCI VGA card whenever ACP card is plugged
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F3:Language F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Integrated Peripherals

* **USB Controller**
  Check whether you use USB port or not.
  Set ‘Disable.’.

* **Init Display First**
  In case of onboard VGA system, you don’t need to select this. But in this system you should select ‘AGP’ type.

* **AC97 Audio**
  Check whether you will use on board sound.
  Set ‘Disable’

* **AC97 Modem**
  Check whether you will use on board modem.
  Set ‘Disable’

2.2.5. Integrated Peripherals

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
Integrated Peripherals
× USB Mouse Support Disabled
Init Display First [AGP]
AC97 Audio [Disabled]
AC97 Modem [Disabled]
Onboard Sound [Enabled]
Power On By Mouse [Disabled]
Power On By Keyboard [Disabled]
× KB Power ON Password Enter
Onboard FDC Controller [Enabled]
Onboard Serial Port 1 [3F8/IRQ4]
Onboard Serial Port 2 [Disabled]
× UART Mode Select Normal
× UR2 Duplex Mode Half
Onboard Parallel Port [378/IRQ7]
Parallel Port Mode [ECP+EPP]
ECP Mode Use DMA [3]
AC BACK Function [Memory]
CIR Port Address [Disabled]
× CIR Port IRQ 11
Item Help
Menu Level ▶
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F3:Language F5:Previous Values F6:Fail-Safe Defaults F7:Optinized Defaults

Integrated Peripherals

*** Onboard Serial Port 1 / 2**

Set the address of serial port manually or automatically.

Set Onboard Serial Port 2 as ‘Disabled’.

*** Parallel Port Mode**

Set the address of parallel port manually or automatically.

Set the printer mode..

Set Parallel Port Mode as **[ECP+EPP].**

*** AC Back Function**

When there is irregular power shut down, it memorizes last status and work.

Set AC Back Function as ‘Memory’.

2.2.6. Power Management Setup

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
Power Management Setup
ACPI Suspend Type [S1(POS)]
x USB Device Wake-Up From S3 Disabled
Power Management [User Define]
Video Off Method [DPMS]
Video Off In Suspend [Yes]
Suspend Type [Stop Grant]
MODEM Use IRQ [NA]
Suspend Mode [Disabled]
HDD Power Down [Disabled]
Soft-Off by PWR-BTTN [Delay 4 Sec.]
PME Event Wake Up [Enabled]
ModemRingOn/WakeOnLan [Enabled]
Resume by Alarm [Disabled]
x Date(of Month) Alarm Everyday
x Time(hh:mm:ss) Alarm 0 : 0 : 0
** Reload Global Timer Events **
Primary IDE 0 [Disabled]
Primary IDE 1 [Disabled]
Item Help
Menu Level ▶
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F3:Language F5:Previous Values F6:Fail-Safe Defaults F7:Optimized Defaults

Power Management Setup

*** Modem Use IRQ**

Set IRQ which you will use Modem.
Set this menu as [NA]

* **Soft – off by PWR – BTTN**

Delay 4 Sec – In case of system is working, it turns soft-off with pressing power button for 4 sec.

2.2.7. PnP/PCI Configuration Setup

Set the value of IRQ PCI, ISA devices.

PnP/PCI Configuration Setup

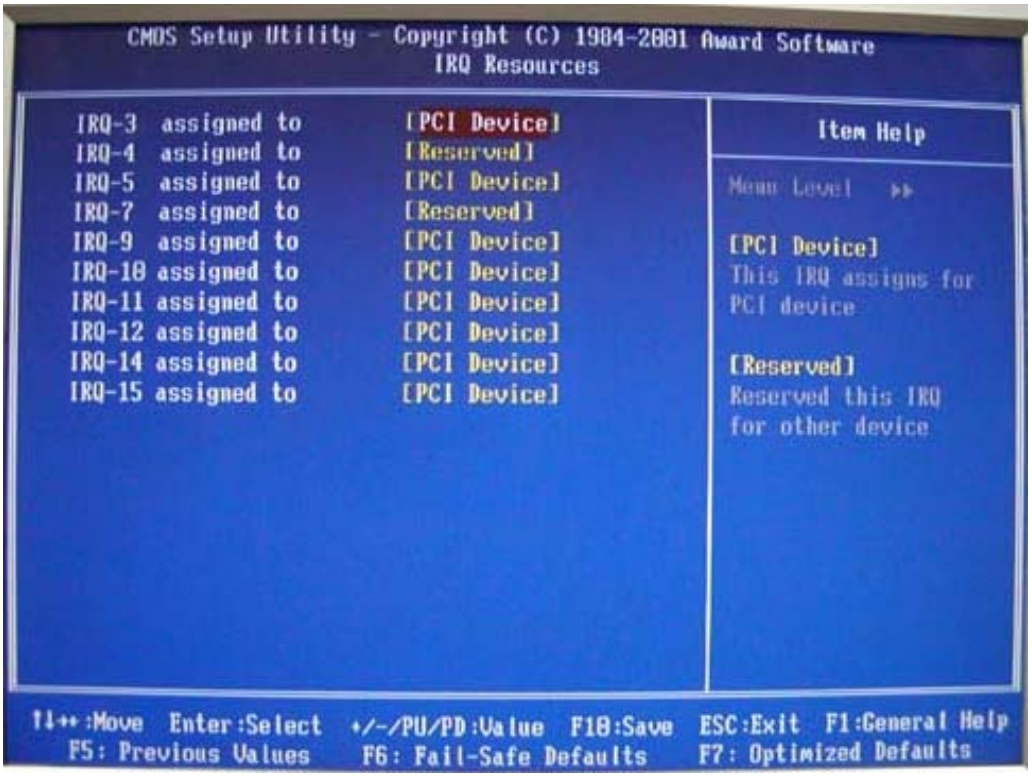
This field enables management of PnP compatible devices. When you set ‘Auto’, IRQ & DMA bios will be set automatically. When you set ‘Controlled by’, dialog will appears like above picture. Set ‘Manual’.

CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
PnP/PCI Configurations
Resources Controlled By [Manual]
IRQ Resources [Press Enter]
PCI1/PCI5 IRQ Assignment [Auto]
PCI2 IRQ Assignment [Auto]
PCI3 IRQ Assignment [Auto]
PCI4 IRQ Assignment [Auto]
Item Help
Menu Level ▶
When resources are controlled manually, assign each system interrupt a type, depending on the type of device using the interrupt
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

PnP/PCI Configuration Setup

If you set ‘Manual’ in **Resources Controlled By,** user can adjust IRQ Resources.

Select ‘Press Enter’.


CMOS Setup Utility - Copyright (C) 1984-2001 Award Software
IRQ Resources
IRQ-3 assigned to [PCI Device]
IRQ-4 assigned to [Reserved]
IRQ-5 assigned to [PCI Device]
IRQ-7 assigned to [Reserved]
IRQ-9 assigned to [PCI Device]
IRQ-10 assigned to [PCI Device]
IRQ-11 assigned to [PCI Device]
IRQ-12 assigned to [PCI Device]
IRQ-14 assigned to [PCI Device]
IRQ-15 assigned to [PCI Device]
Item Help
Menu Level ▸▸
[PCI Device]
This IRQ assigns for PCI device
[Reserved]
Reserved this IRQ for other device
↑↓→←:Move Enter:Select +/-/PU/PD:Value F10:Save ESC:Exit F1:General Help
F5: Previous Values F6: Fail-Safe Defaults F7: Optimized Defaults

PnP/PCI Configuration Setup

To protect error, set IRQ 4 & 7as ‘Reserved’.

* PC Health Status & Frequency / Voltage Control

Follow default settings.

2.2.8. Save & Exit Setup

Save changed value and exit CMOS.

Save & Exit Setup

Select ‘Save & exit’ or press F10 key, then type ‘y’ and press enter. CMOS setup is completed.

2.3. MDSR-DVR Setting

1. Insert **Windows2000 Professional Bootable CD and follow the instruction**.

- Boot with CD -> partition of 'C' root : 3GB, file system : NTFS

2. Install Driver

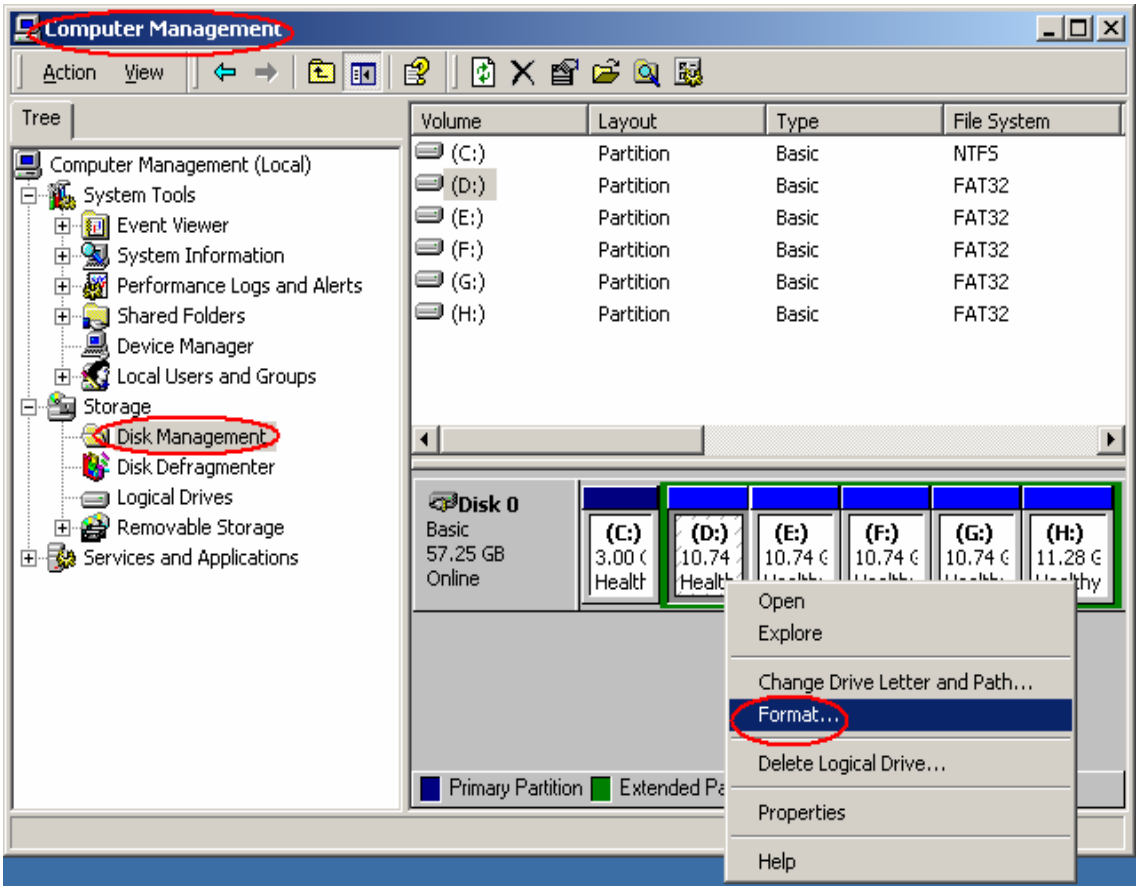
- Set VGA Card, Sound Card, Capture board etc. driver. (saved at C:\Backup)

3. Set HDD partition (file system : FAT32)

*** See the 2.4 Partition Setting**

- computer management -> storage -> disk management

Set as Extended drive -> Make 5 partitions as logical drive and format them.



4. Change default setting of Windows

a. Click right mouse button on Desktop screen and select properties -> display properties

-> setting -> colors(True Color(32bit)), screen area(1024X768).

b. Change the detail option of 'Power options properties' like a following pictures.

Set Screen Saver as 'None'.

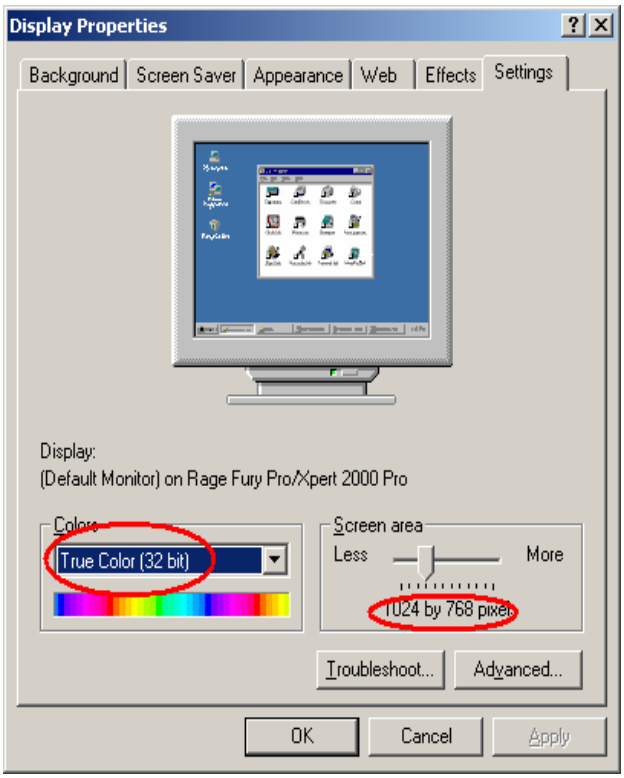


Figure 2-3-1

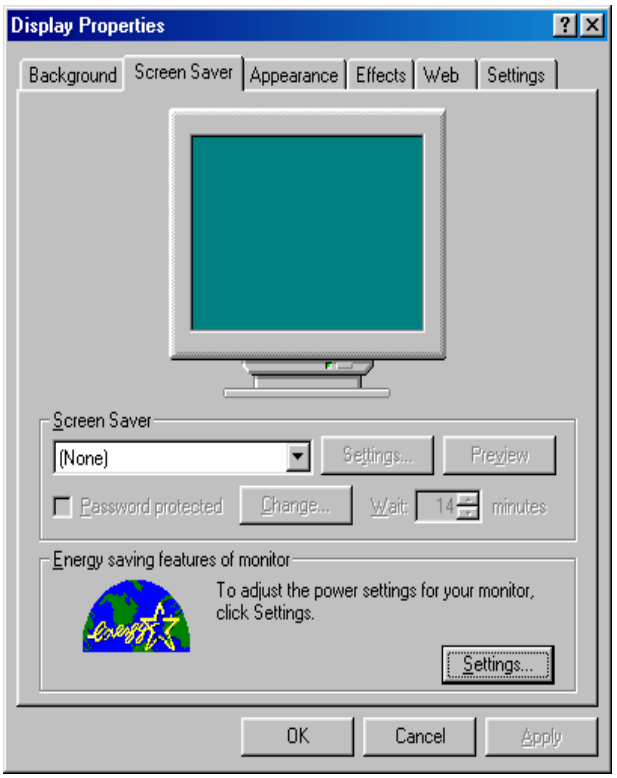


Figure 2-3-2

Click ‘Setting’ button on ‘Screen Saver’ tab menu and then following picture appears. Set every field like a picture. If you don’t set like a picture, system might goes to power saving mode and nothing would be displayed on the screen.

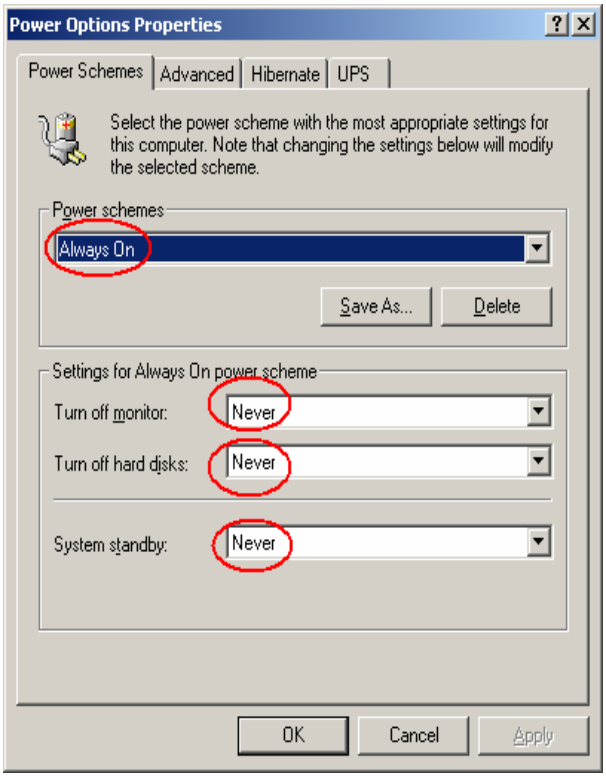


Figure 2-13 Power Options Properties

c. Recycle Bin setting -> properties -> check ‘Do not move files to the Recycle Bin’ &. ‘Remove files immediately when deleted’.

d. Event log setting : administrator tool -> event viewer -> check ‘Overwrite events as needed’.

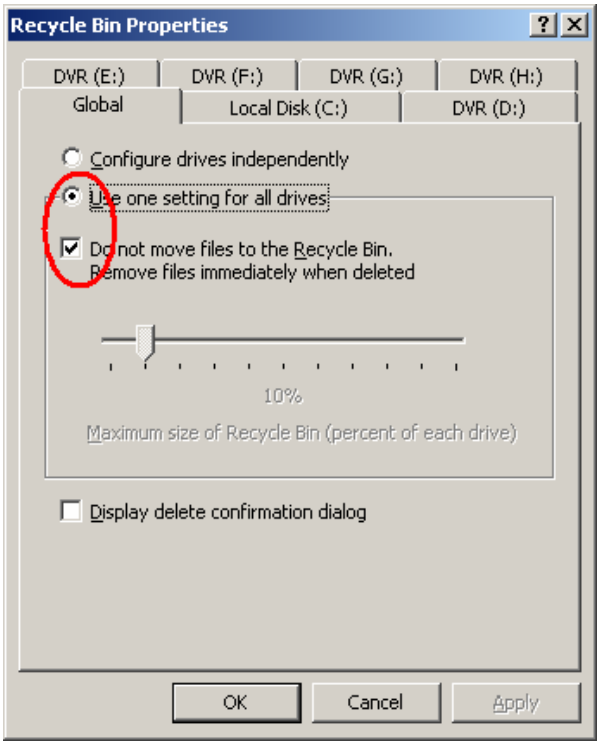


Figure 2-3-3

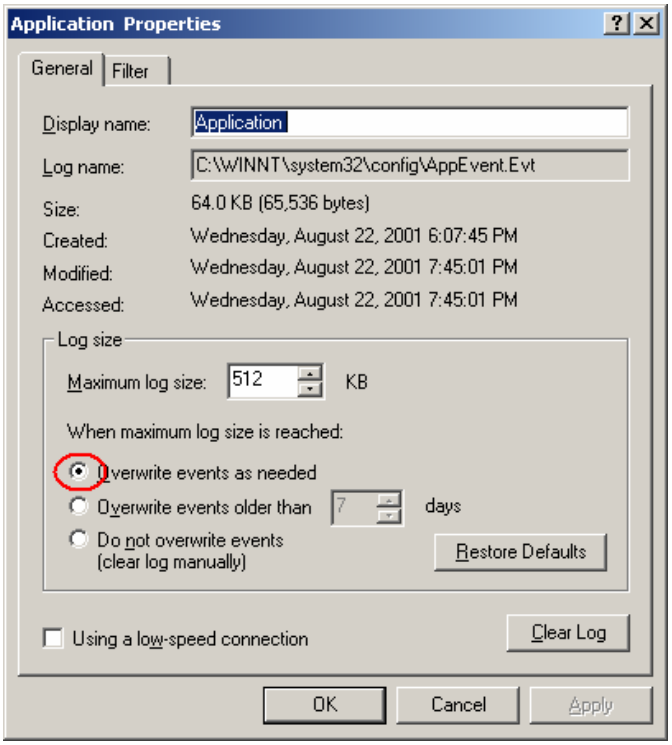


Figure 2-3-4

e. control panel -> Don't check 'Enable pointer shadow' option.

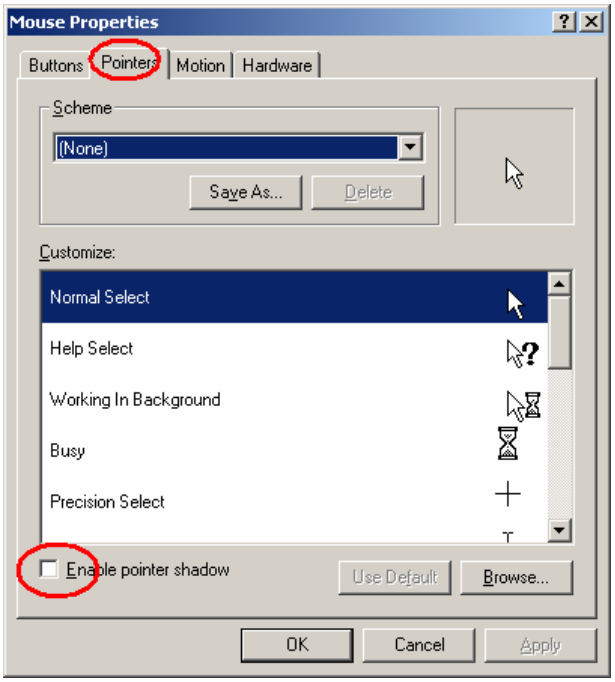


Figure 2-3-5

f. control panel -> users & passwords setting .

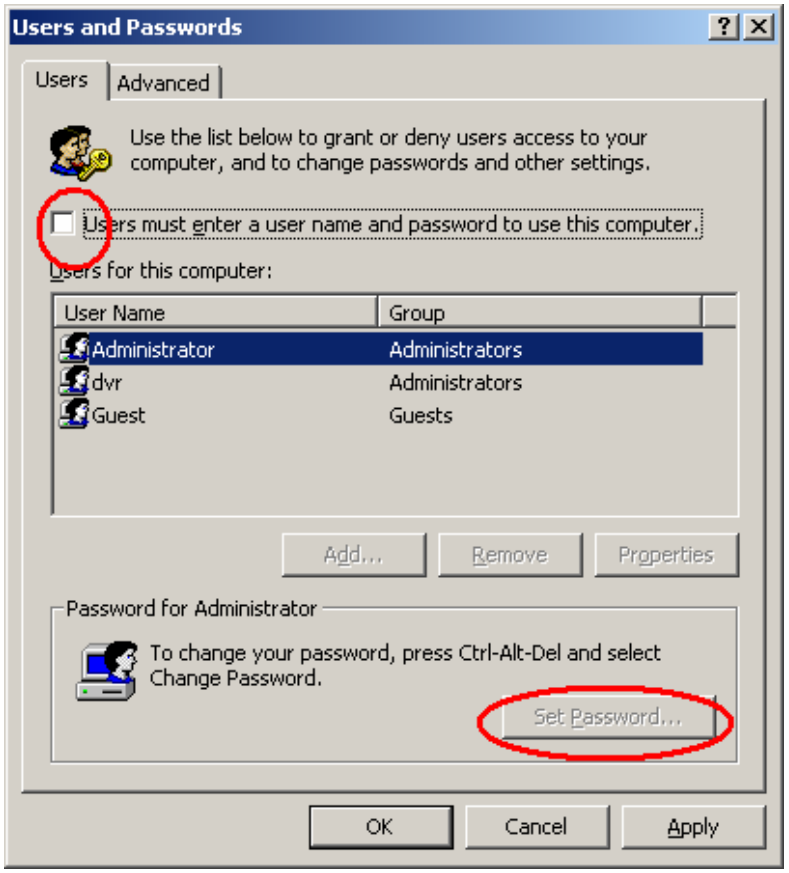


Figure 2-3-6

5. directX8.0 install (saved at c:\Backup directory)

- Download Windows 2000 drivers from www.microsoft.com and then install it.

6. Install Windows2000 Service pack 2. (saved at c:\Backup directory)

- Download it from www.microsoft.com and then install it.

7. Install Language pack (Option)

- After installing language pack, select desired language and set it as default language at **control panel -> global setting** and then restart system.

8. NetSafe-DVR installation (saved at c:\Backup directory)

- Install program with using installation CD.
- Choose correctly channel(16ch or 8ch) -> cpu type(P-III or P-IV) -> video type(NTSC or PAL) -> DVR board(TW99 or TW98) according to your system.

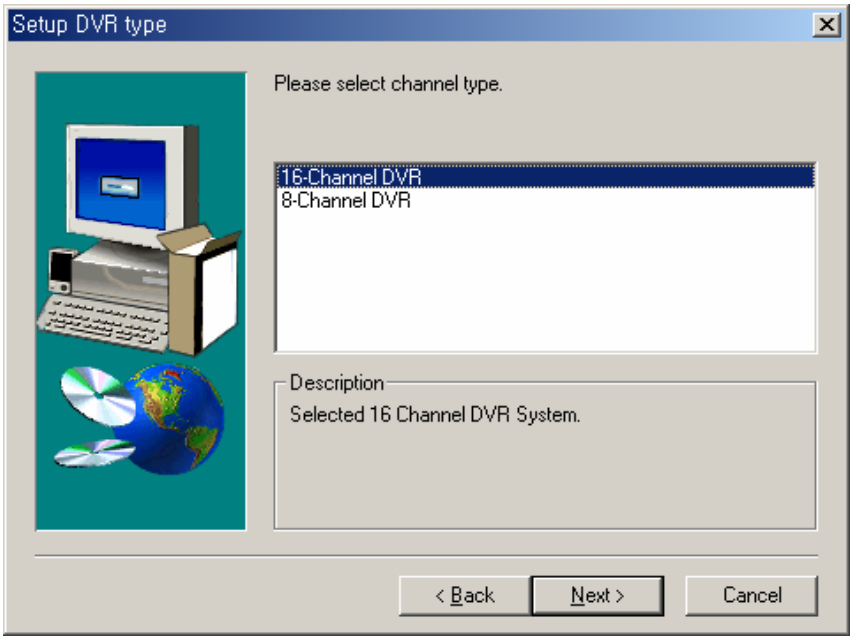


Figure 2-3-7

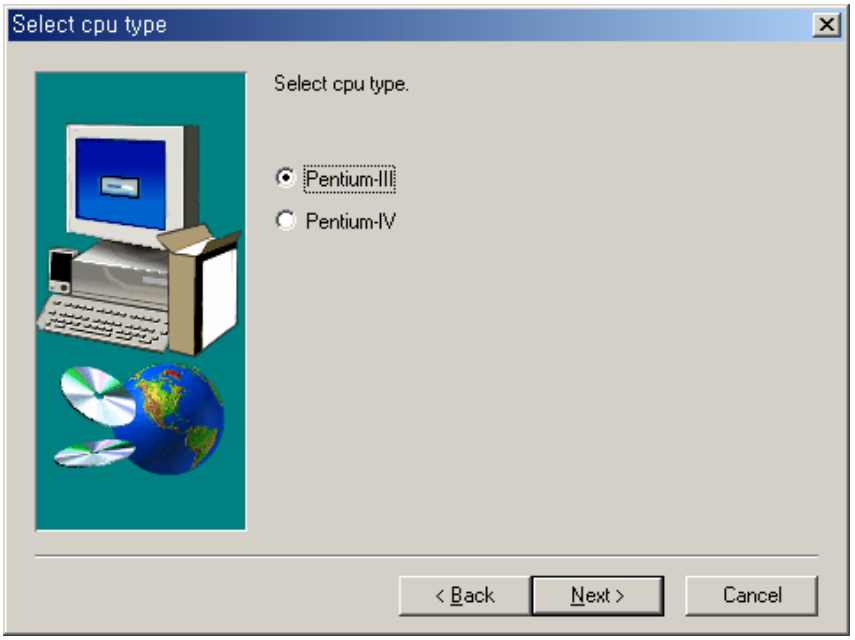


Figure 2-3-8

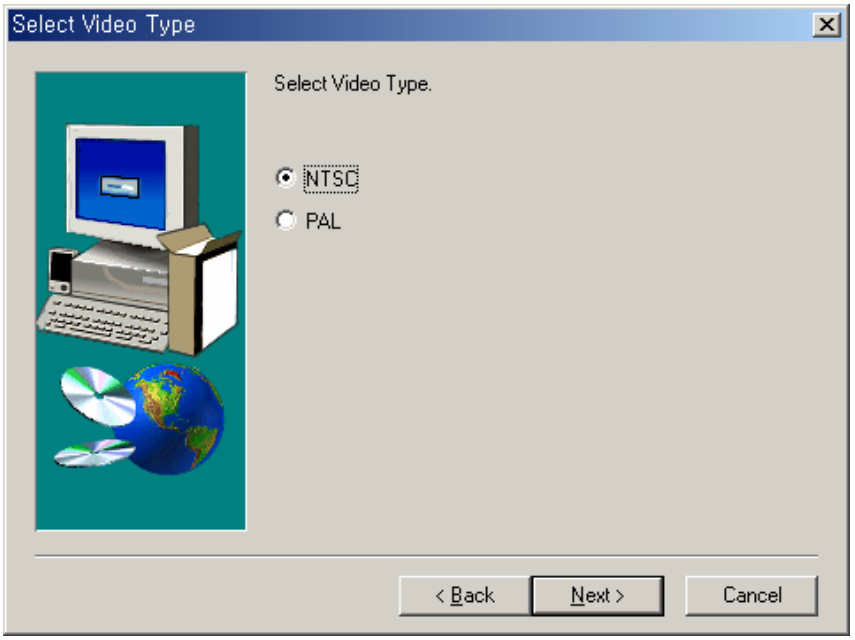


Figure 2-3-9

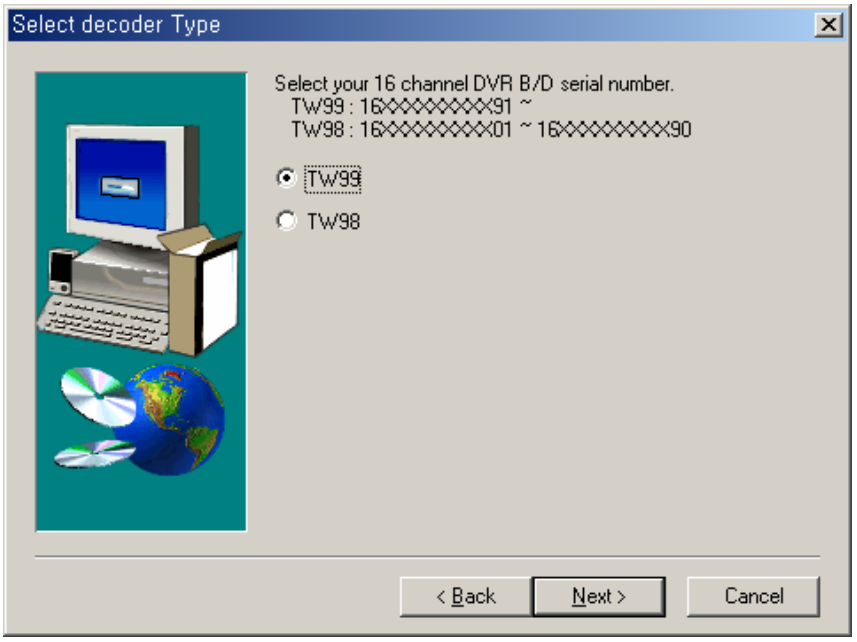


Figure 2-3-10

9. The End MDSR-DVR Series Setting. Thank you.

2.4. MDSR-DVR Partition Setting

1. Start -> settings -> Control panel -> administrator tools -> computer management

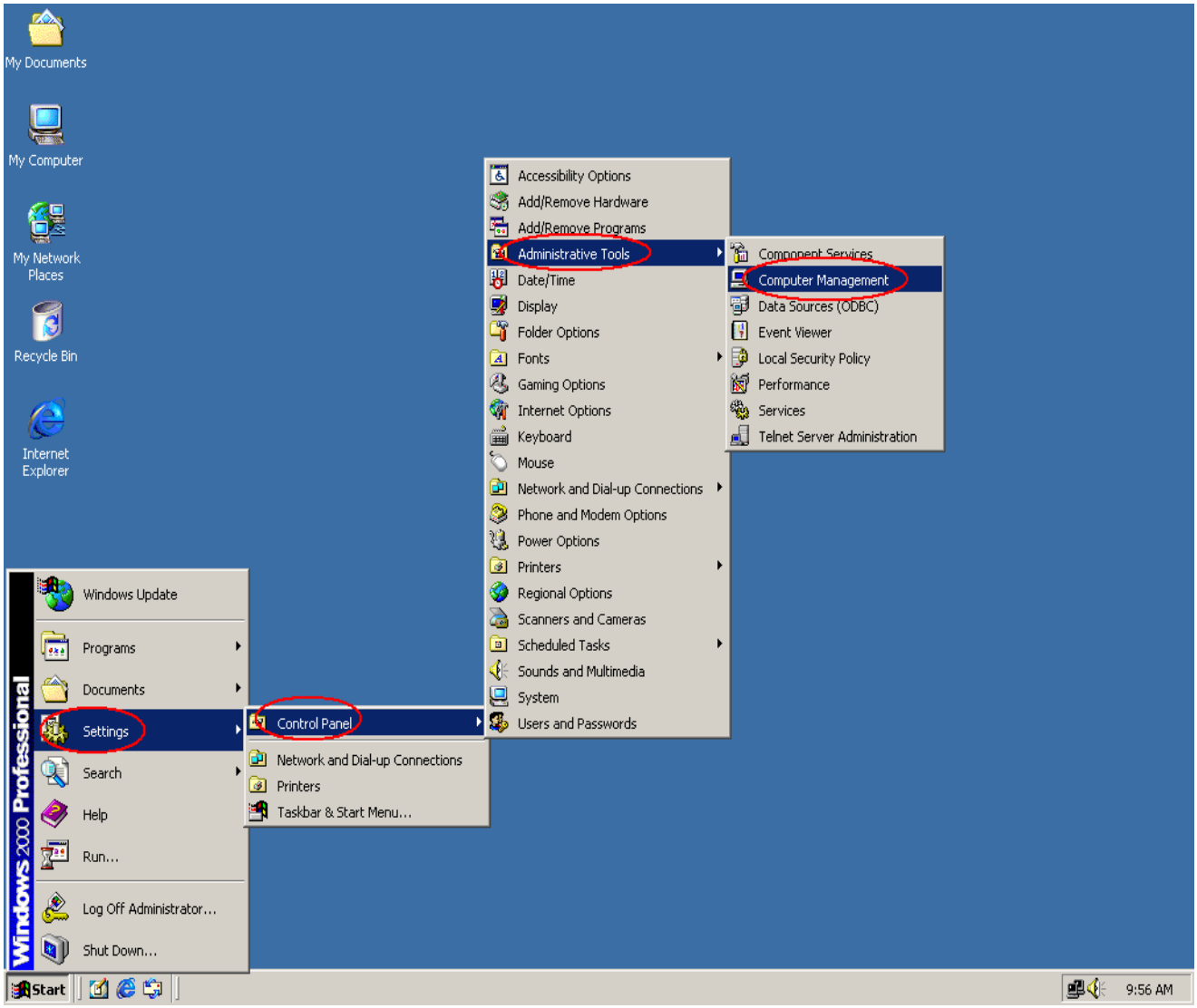


Figure 2-4-1

2. Storage -> disk management

2.1. Click right mouse button at “unallocated partition” -> create partition

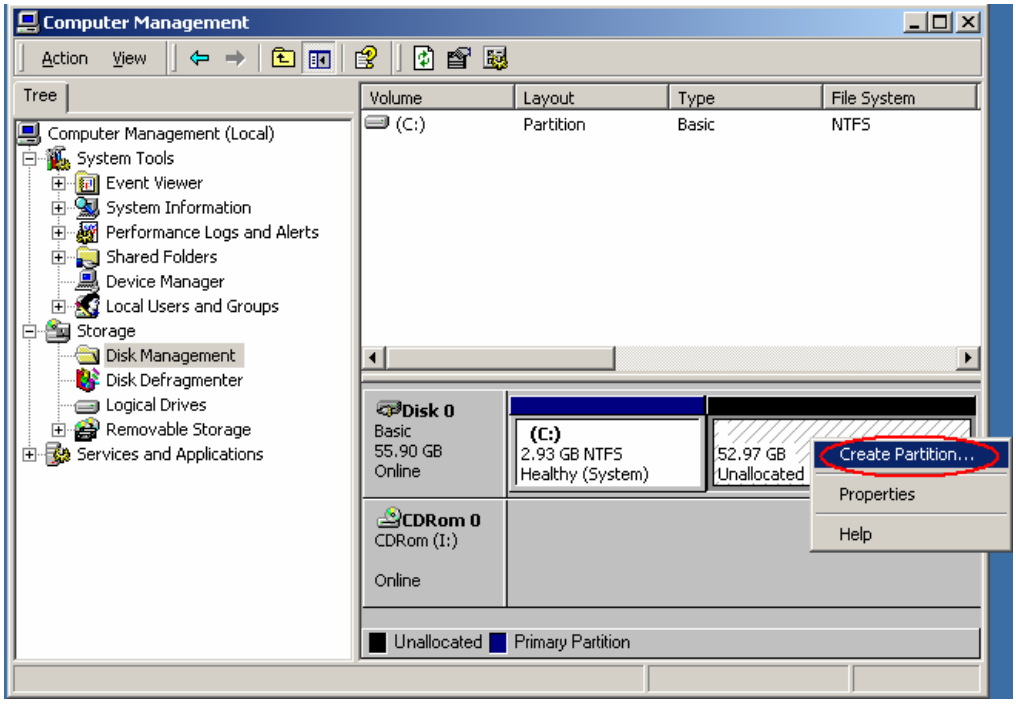


Figure 2-4-2

2.2. Click Next -> select the “Extended partition” type -> Next

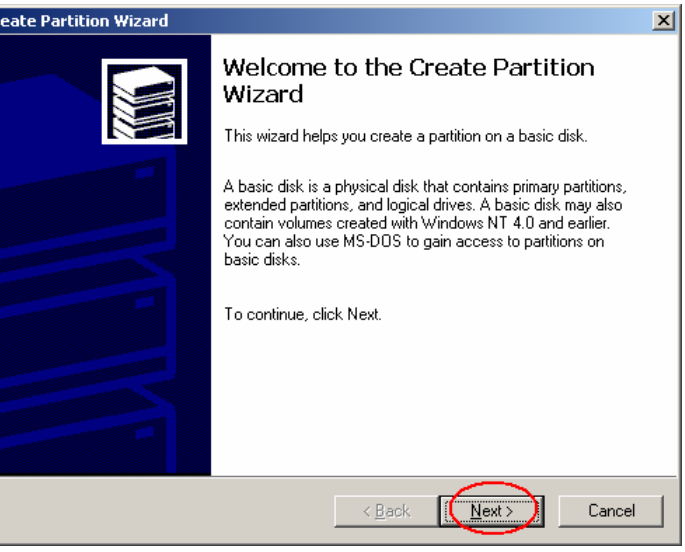

eate Partition Wizard
Welcome to the Create Partition Wizard
This wizard helps you create a partition on a basic disk.
A basic disk is a physical disk that contains primary partitions, extended partitions, and logical drives. A basic disk may also contain volumes created with Windows NT 4.0 and earlier. You can also use MS-DOS to gain access to partitions on basic disks.
To continue, click Next.
< Back
Next >
Cancel

Figure 2-4-3

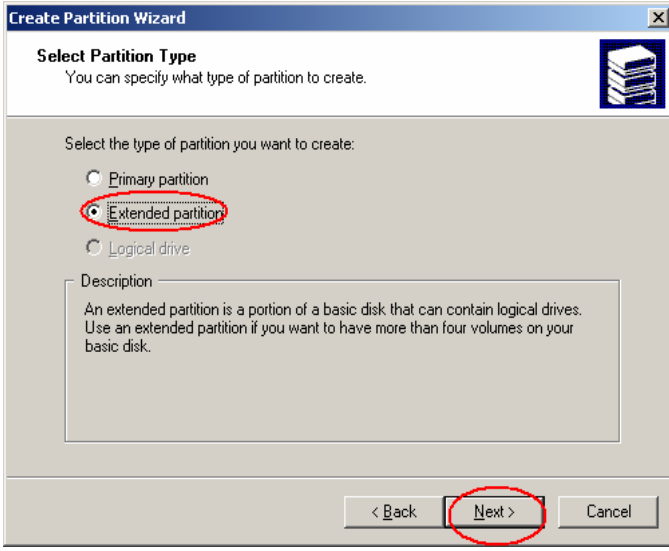

Create Partition Wizard
Select Partition Type
You can specify what type of partition to create.
Select the type of partition you want to create:
Primary partition
Extended partition
Logical drive
Description
An extended partition is a portion of a basic disk that can contain logical drives. Use an extended partition if you want to have more than four volumes on your basic disk.
< Back
Next >
Cancel

Figure 2-4-4

2.3. Choose a partition size of disk space to use -> click Finish

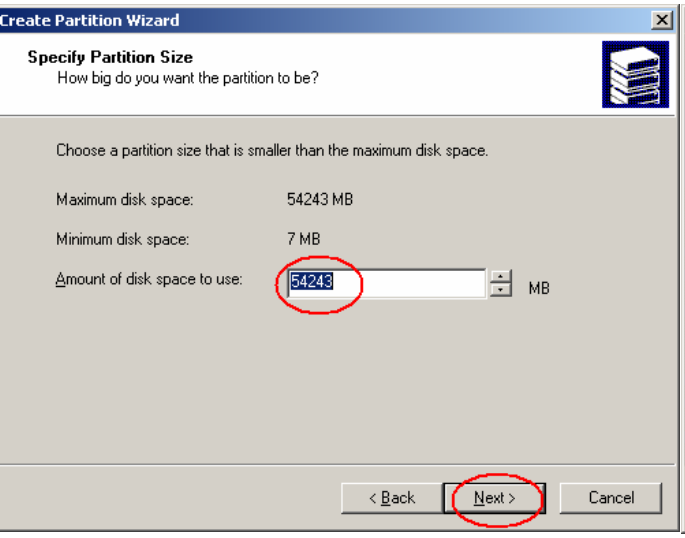

Create Partition Wizard
Specify Partition Size
How big do you want the partition to be?
Choose a partition size that is smaller than the maximum disk space.
Maximum disk space: 54243 MB
Minimum disk space: 7 MB
Amount of disk space to use: 54243 MB
< Back
Next >
Cancel

Figure 2-4-5

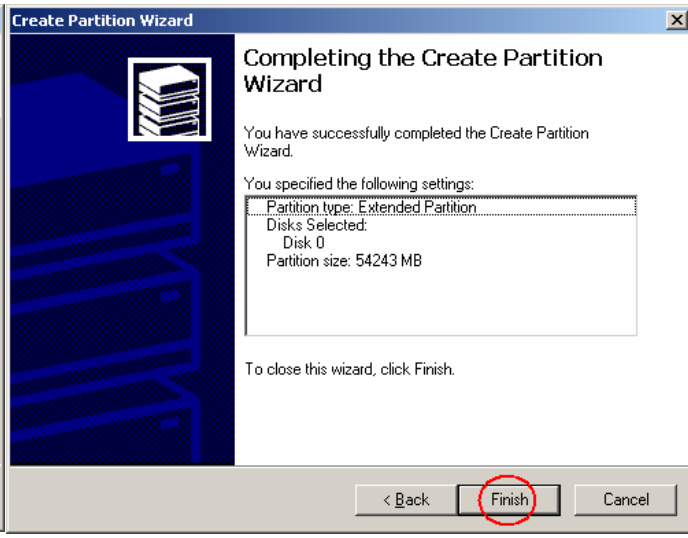


Figure 2-4-6

2.4. Now, your partition is “Free Space”. -> mouse right button click -> create logical drive.

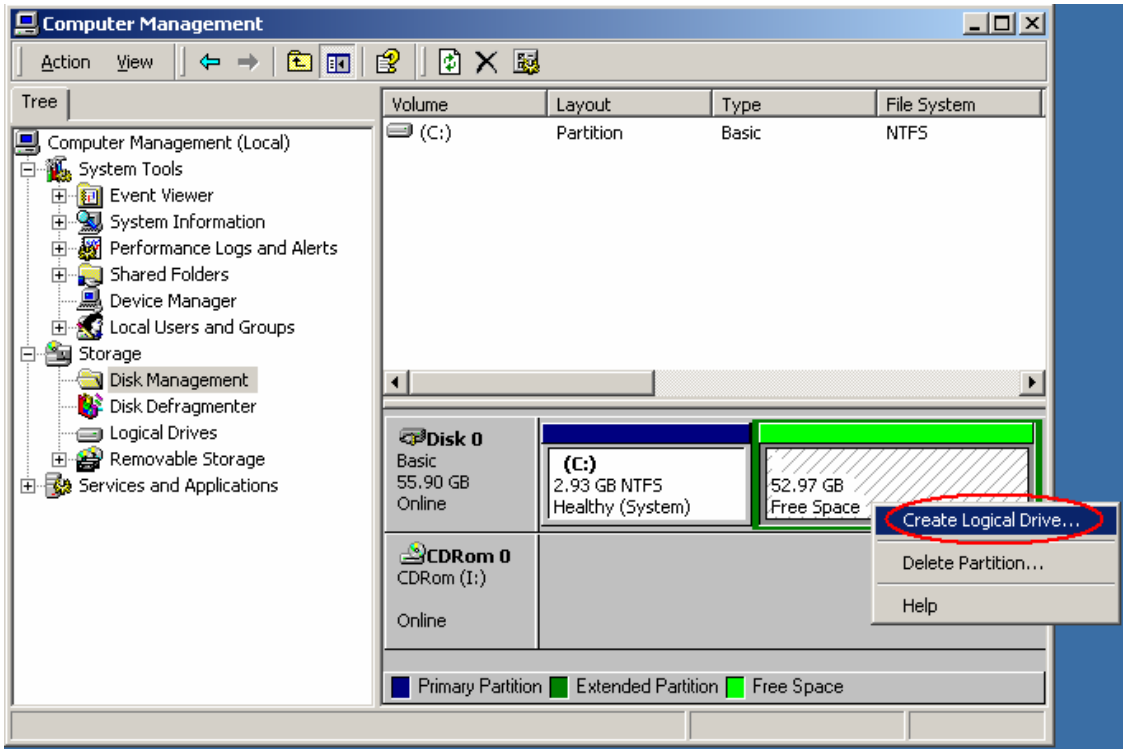


Figure 2-4-7

2.5. Now, your partition is “Free Space”. -> Click right mouse button -> create logical drive.

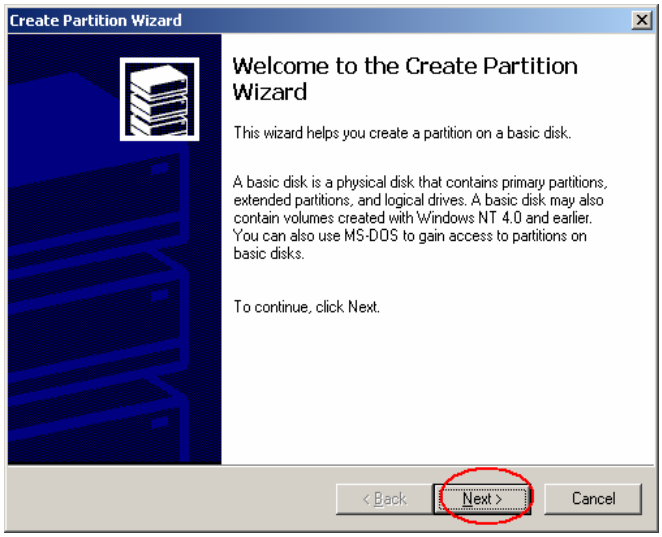

Create Partition Wizard
Welcome to the Create Partition Wizard
This wizard helps you create a partition on a basic disk.
A basic disk is a physical disk that contains primary partitions, extended partitions, and logical drives. A basic disk may also contain volumes created with Windows NT 4.0 and earlier. You can also use MS-DOS to gain access to partitions on basic disks.
To continue, click Next.
< Back
Next >
Cancel

Figure 2-4-8

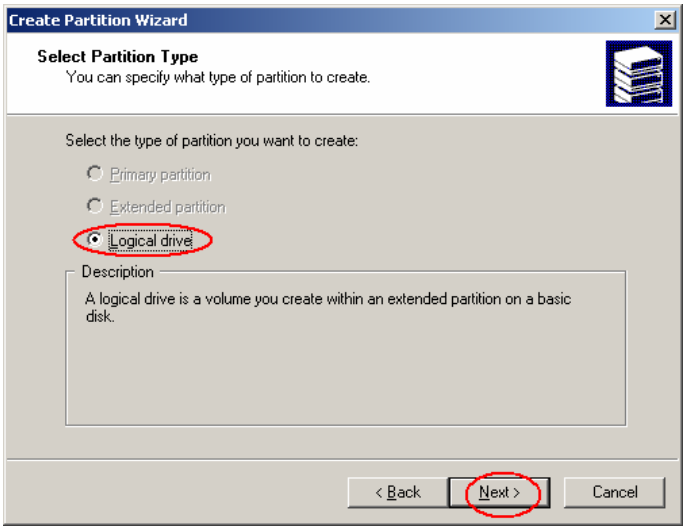

Create Partition Wizard
Select Partition Type
You can specify what type of partition to create.
Select the type of partition you want to create:
Primary partition
Extended partition
Logical drive
Description
A logical drive is a volume you create within an extended partition on a basic disk.
< Back
Next >
Cancel

Figure 2-4-9

2.6. Choose a logical partition size. -> Assign drive letter and path.

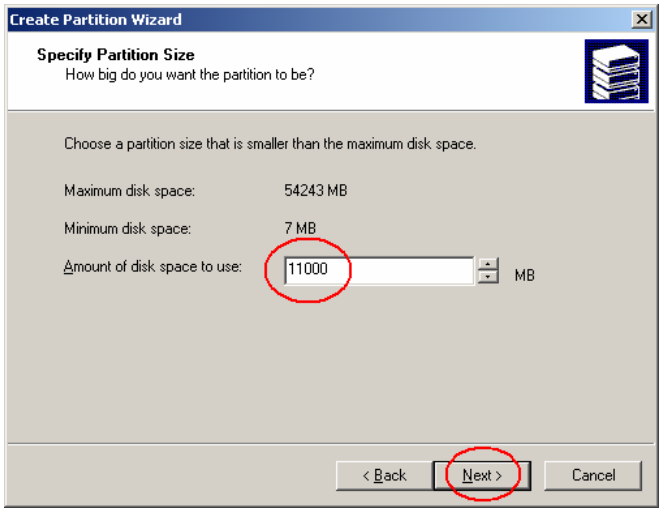

Create Partition Wizard
Specify Partition Size
How big do you want the partition to be?
Choose a partition size that is smaller than the maximum disk space.
Maximum disk space: 54243 MB
Minimum disk space: 7 MB
Amount of disk space to use: 11000 MB
< Back
Next >
Cancel

Figure 2-4-10

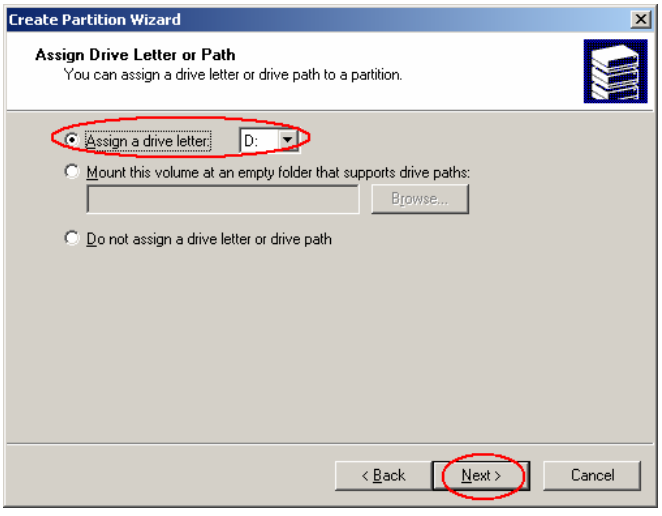

Create Partition Wizard
Assign Drive Letter or Path
You can assign a drive letter or drive path to a partition.
Assign a drive letter: D:
Mount this volume at an empty folder that supports drive paths:
Browse...
Do not assign a drive letter or drive path
< Back
Next >
Cancel

Figure 2-4-11

2.7. format the partition : select “quick format”, “FAT32” -> finish

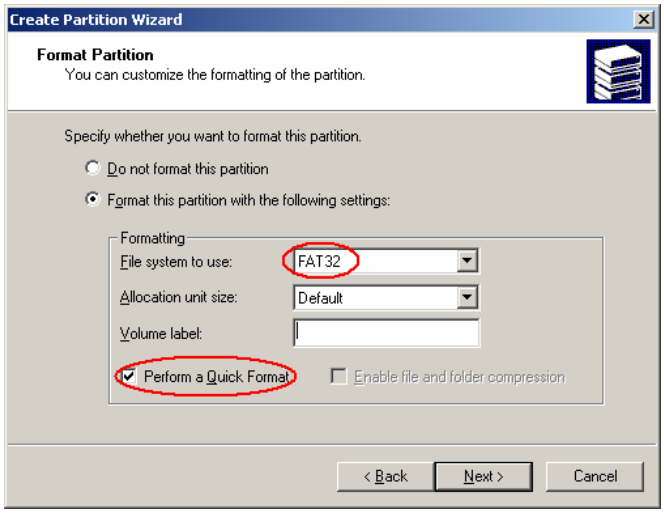

Create Partition Wizard
Format Partition
You can customize the formatting of the partition.
Specify whether you want to format this partition.
Do not format this partition
Format this partition with the following settings:
Formatting
File system to use: FAT32
Allocation unit size: Default
Volume label:
Perform a Quick Format
Enable file and folder compression
< Back
Next >
Cancel

Figure 2-4-12

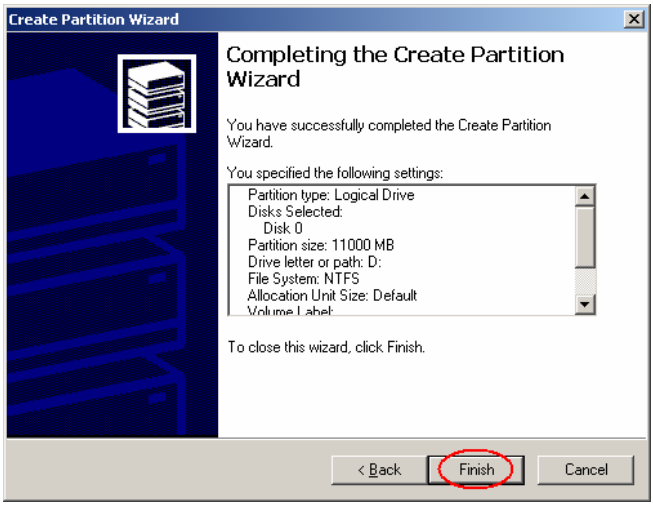


Figure 2-4-13

2.8. You can see that one logical partition created.

-> You must Repeat **Figure** 2.4.7 ~ Figure 2.4.13 progress. -> Confirm the “Logical Drive”.

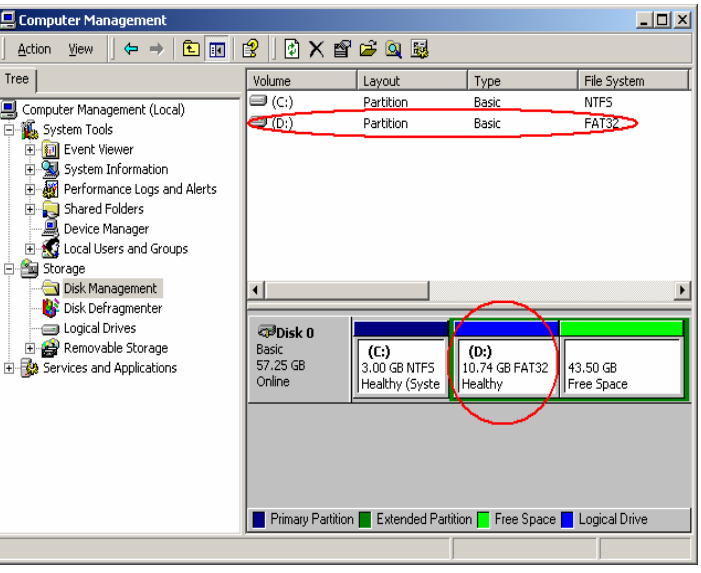


Figure 2-4-14

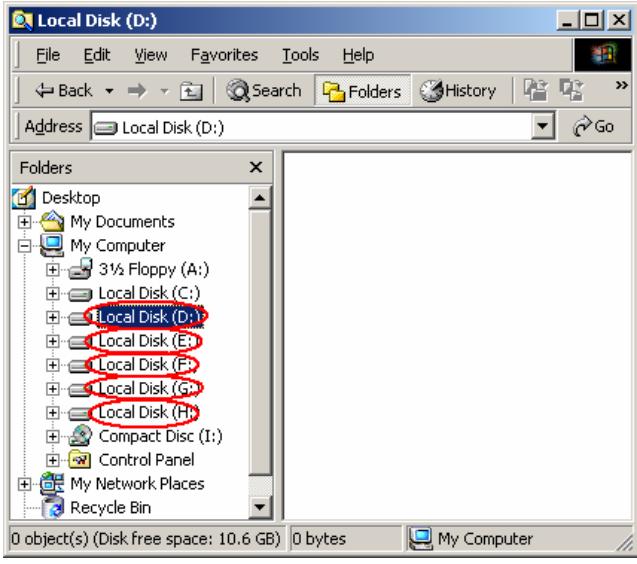


Figure 2-4-15

* If logical drive is not formatted, you should format it.

3. HDD Extension

When factory release NetSafe-DVR, 60GB HDD is installed in NetSafe-DVR. Up to 4 HDDs can be added in the rack like the picture below.

3.1. Mount HDD in rack.

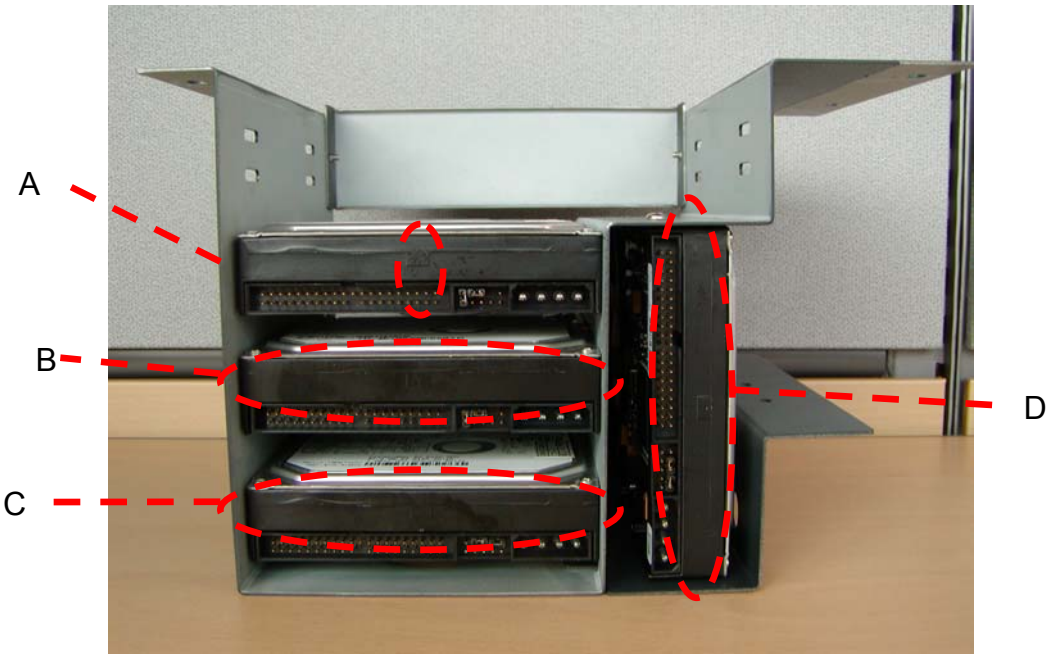
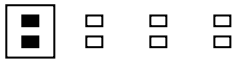
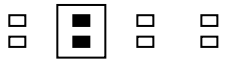
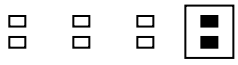


Figure 2-4-16 HDD Rack

A : Primary Master
B : Secondary Master
C : Secondary Slave
D : Primary Slave

Up to 4 HDDs are expandable.
- For expansion HDD, we recommend you to follow the orders like picture above. (order : A->B->C->D).
- Up to 3 HDDs expansion, follow our recommendation. (A:Primary Master, B:Primary Slave, C:Secondary Master)
- Up to 2 HDDs expansion, A:Primary Master, B:Primary Slave.

* HDD Jumper : Set Master/Slave mode. When user want to use more HDD, refer to the manual of a current using HDD.
  Following steps are about Segate HDD jumper setting.

	Master or single drive
	Drive is slave
	Master with non ATA compatible slave
	Cable select
	Limit drive capacity

e.g) Seagate HDD Options jumper block

3.2. Computer Management -> Storage -> disk management

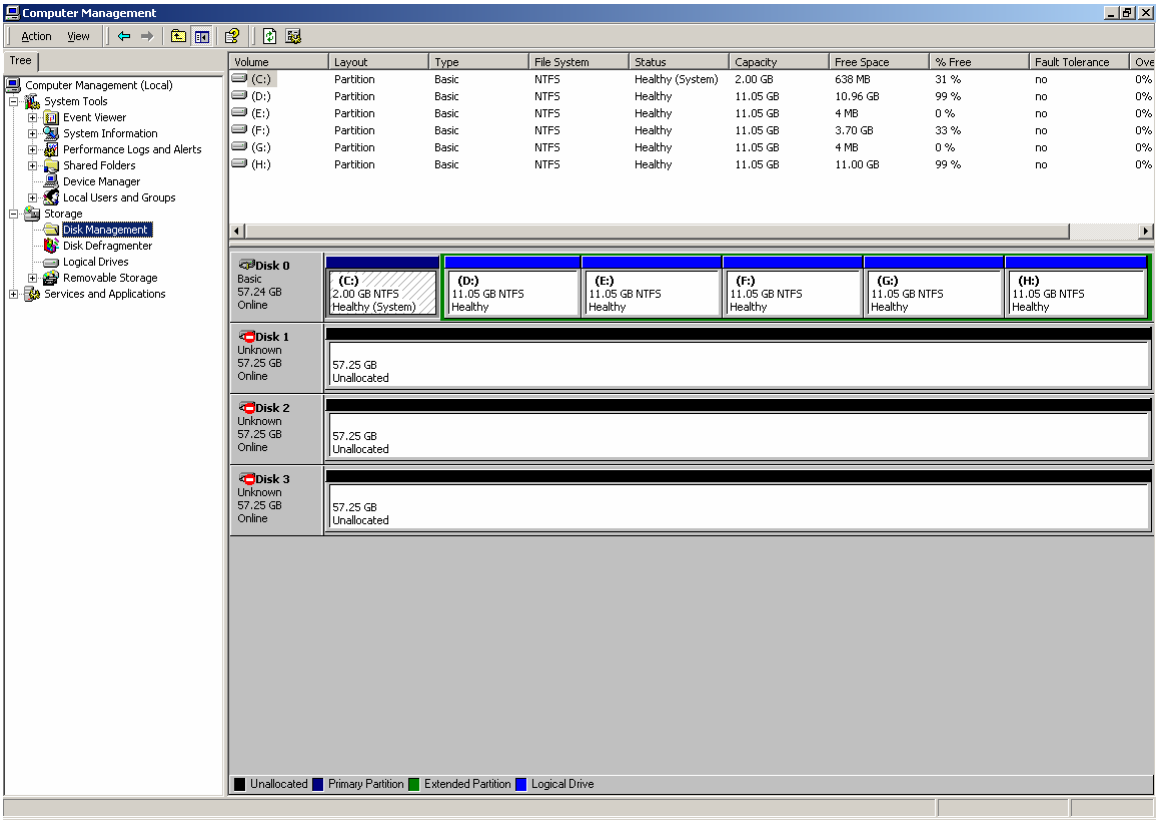
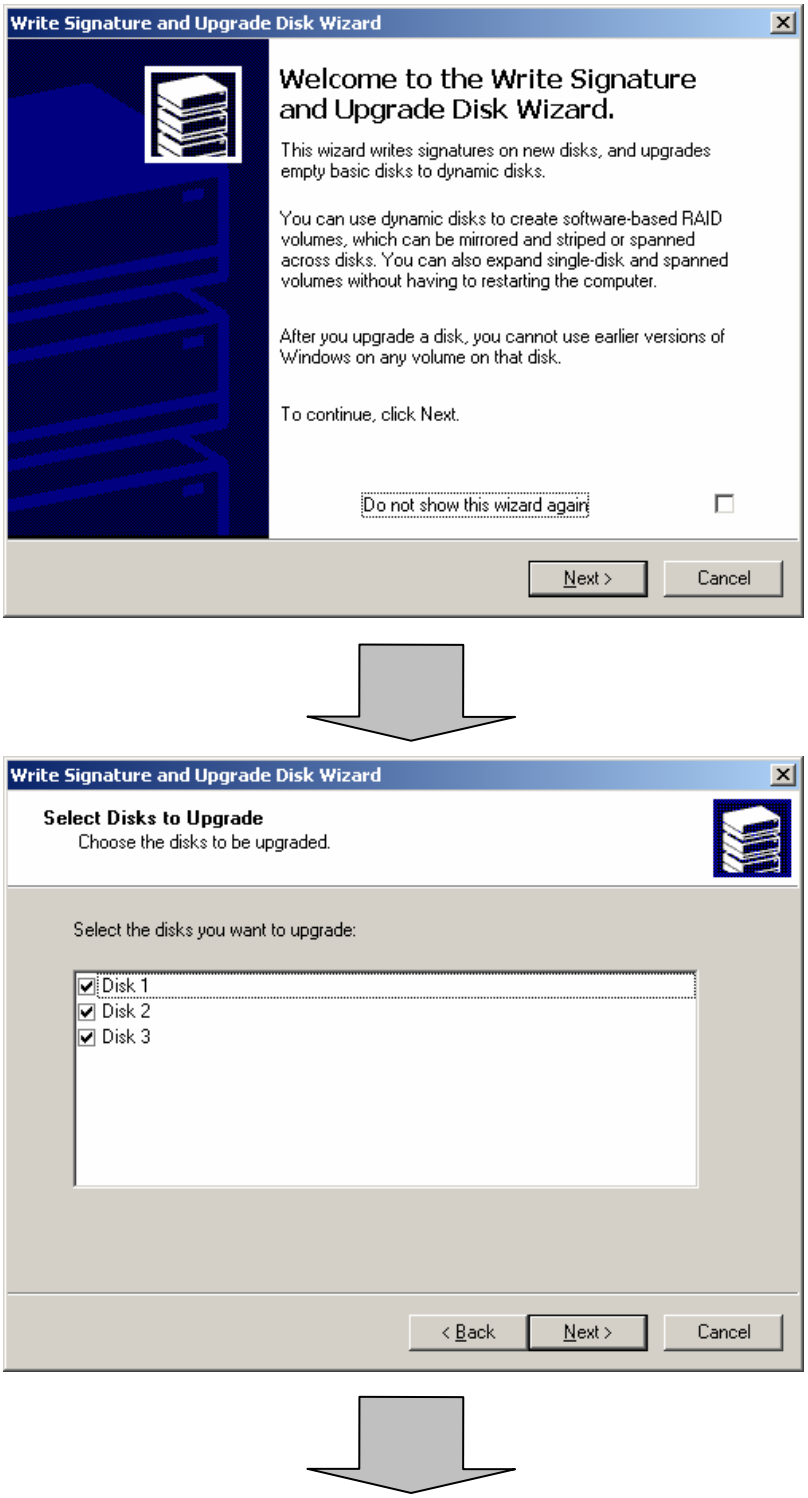
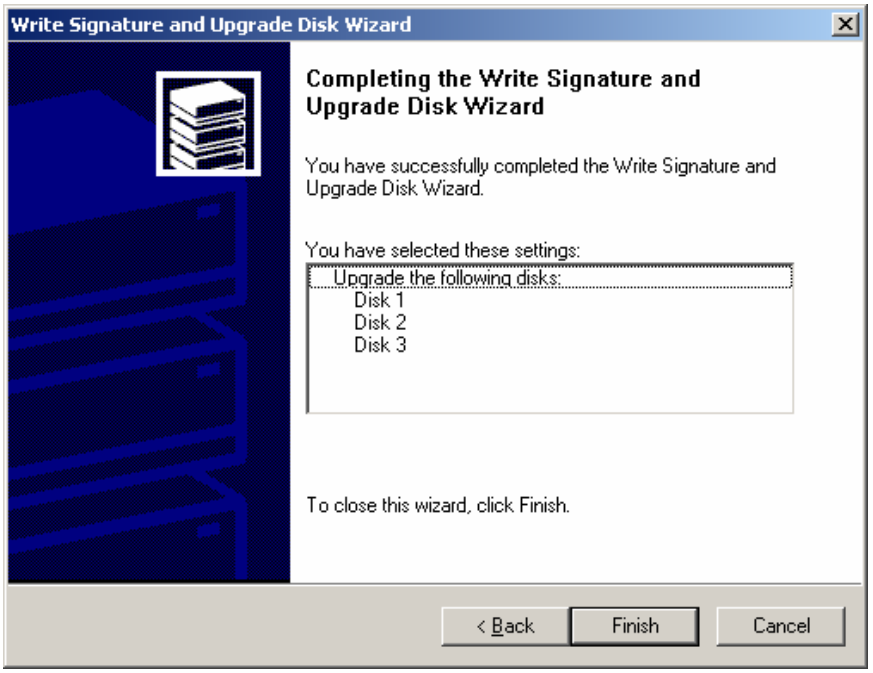

Computer Management
Action View
Tree
Computer Management (Local)
System Tools
Event Viewer
System Information
Performance Logs and Alerts
Shared Folders
Device Manager
Local Users and Groups
Storage
Disk Management
Disk Defragmenter
Logical Drives
Removable Storage
Services and Applications
Volume Layout Type File System Status Capacity Free Space % Free Fault Tolerance Ove
(C:) Partition Basic NTFS Healthy (System) 2.00 GB 638 MB 31 % no 0%
(D:) Partition Basic NTFS Healthy 11.05 GB 10.96 GB 99 % no 0%
(E:) Partition Basic NTFS Healthy 11.05 GB 4 MB 0 % no 0%
(F:) Partition Basic NTFS Healthy 11.05 GB 3.70 GB 33 % no 0%
(G:) Partition Basic NTFS Healthy 11.05 GB 4 MB 0 % no 0%
(H:) Partition Basic NTFS Healthy 11.05 GB 11.00 GB 99 % no 0%
Disk 0 Basic 57.24 GB Online
(C:) 2.00 GB NTFS Healthy (System)
(D:) 11.05 GB NTFS Healthy
(E:) 11.05 GB NTFS Healthy
(F:) 11.05 GB NTFS Healthy
(G:) 11.05 GB NTFS Healthy
(H:) 11.05 GB NTFS Healthy
Disk 1 Unknown 57.25 GB Online
57.25 GB Unallocated
Disk 2 Unknown 57.25 GB Online
57.25 GB Unallocated
Disk 3 Unknown 57.25 GB Online
57.25 GB Unallocated
Unallocated Primary Partition Extended Partition Logical Drive

Figure 2-4-17 Disk Management window after installing 4HDDs

3.3. HDD recognition.


Write Signature and Upgrade Disk Wizard
Welcome to the Write Signature and Upgrade Disk Wizard.
This wizard writes signatures on new disks, and upgrades empty basic disks to dynamic disks.
You can use dynamic disks to create software-based RAID volumes, which can be mirrored and striped or spanned across disks. You can also expand single-disk and spanned volumes without having to restarting the computer.
After you upgrade a disk, you cannot use earlier versions of Windows on any volume on that disk.
To continue, click Next.
Do not show this wizard again
Next >
Cancel
Write Signature and Upgrade Disk Wizard
Select Disks to Upgrade
Choose the disks to be upgraded.
Select the disks you want to upgrade:
Disk 1
Disk 2
Disk 3
< Back
Next >
Cancel


Write Signature and Upgrade Disk Wizard
Completing the Write Signature and Upgrade Disk Wizard
You have successfully completed the Write Signature and Upgrade Disk Wizard.
You have selected these settings:
Upgrade the following disks:
Disk 1
Disk 2
Disk 3
To close this wizard, click Finish.
< Back
Finish
Cancel

3.4. Choose ‘Create Volume’ with clicking right mouse button.

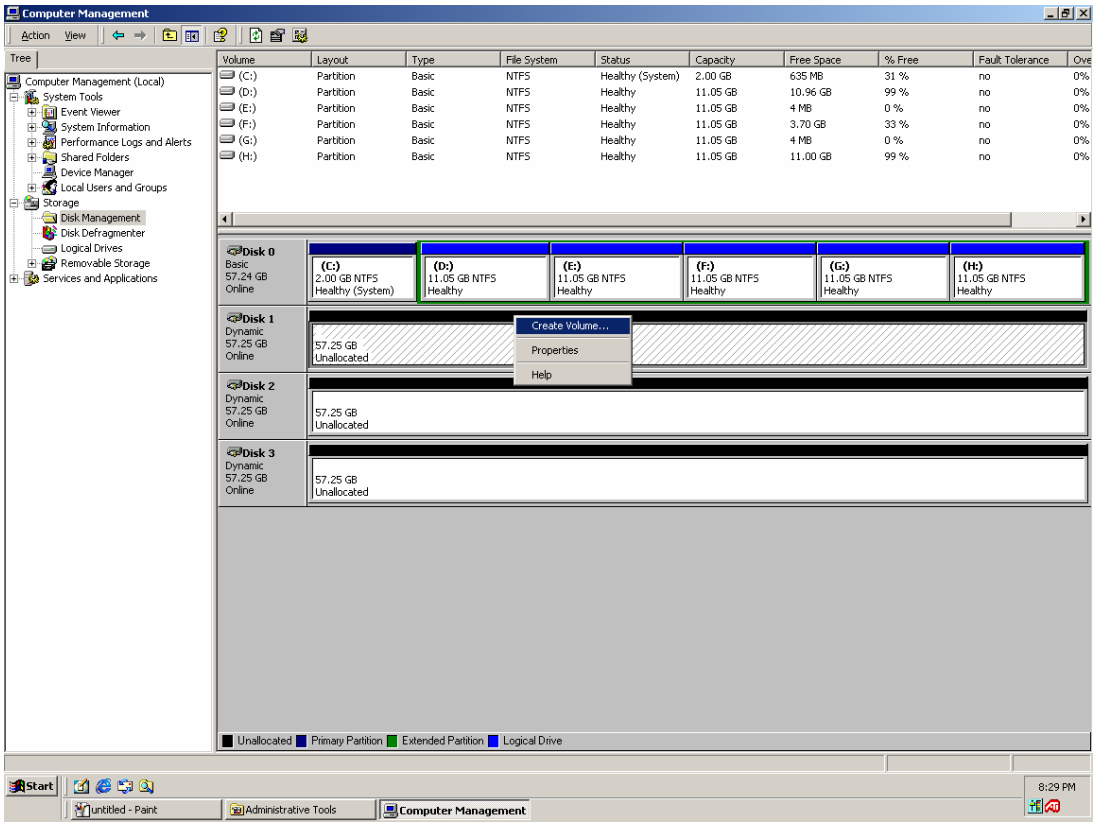
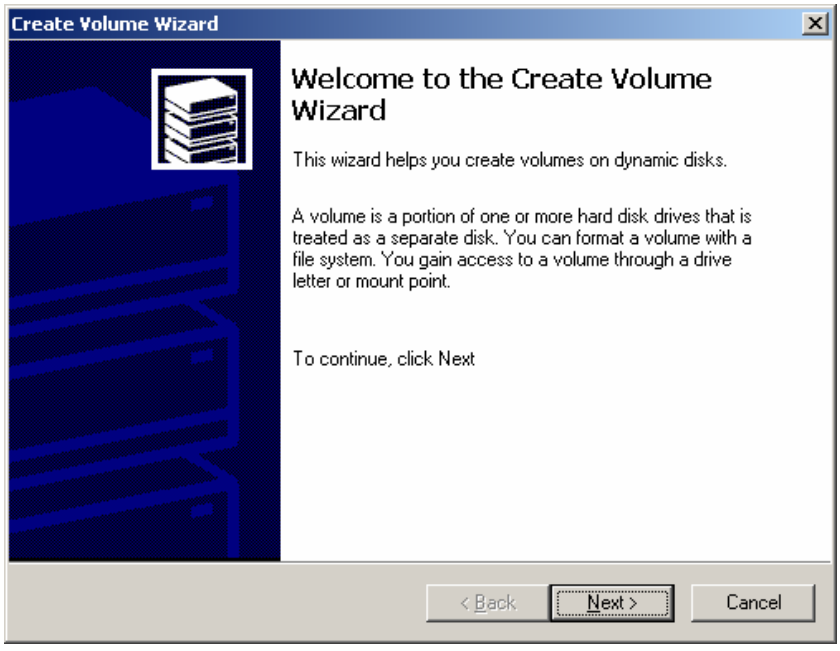
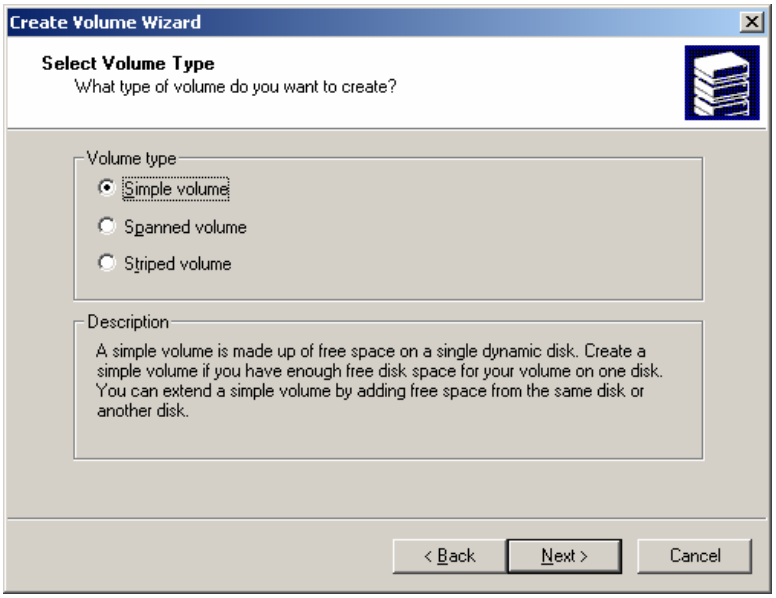
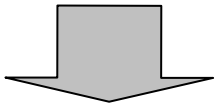
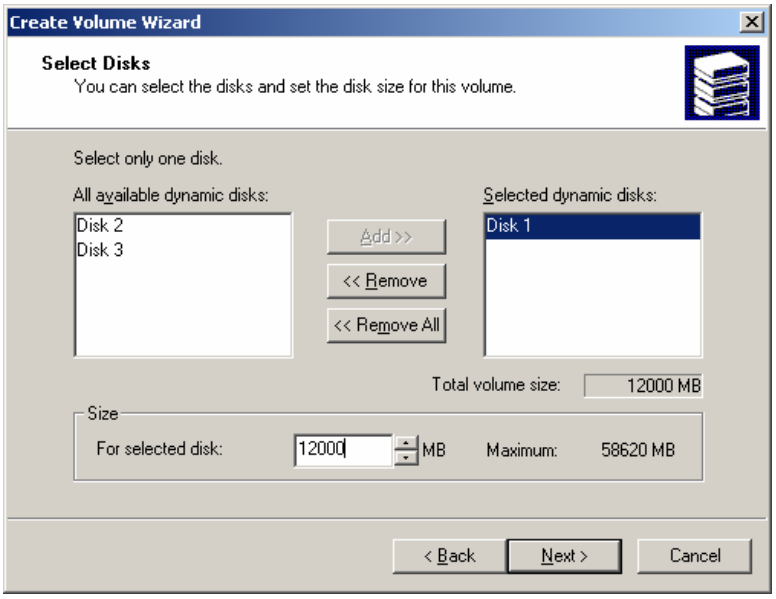

Computer Management
Action View
Tree
Computer Management (Local)
System Tools
Event Viewer
System Information
Performance Logs and Alerts
Shared Folders
Device Manager
Local Users and Groups
Storage
Disk Management
Disk Defragmenter
Logical Drives
Removable Storage
Services and Applications
Volume Layout Type File System Status Capacity Free Space % Free Fault Tolerance
(C:) Partition Basic NTFS Healthy (System) 2.00 GB 635 MB 31 % no 0%
(D:) Partition Basic NTFS Healthy 11.05 GB 10.96 GB 99 % no 0%
(E:) Partition Basic NTFS Healthy 11.05 GB 4 MB 0 % no 0%
(F:) Partition Basic NTFS Healthy 11.05 GB 3.70 GB 33 % no 0%
(G:) Partition Basic NTFS Healthy 11.05 GB 4 MB 0 % no 0%
(H:) Partition Basic NTFS Healthy 11.05 GB 11.00 GB 99 % no 0%
Disk 0 Basic 57.24 GB Online
(C:) 2.00 GB NTFS Healthy (System)
(D:) 11.05 GB NTFS Healthy
(E:) 11.05 GB NTFS Healthy
(F:) 11.05 GB NTFS Healthy
(G:) 11.05 GB NTFS Healthy
(H:) 11.05 GB NTFS Healthy
Disk 1 Dynamic 57.25 GB Online
57.25 GB Unallocated
Create Volume...
Properties
Help
Disk 2 Dynamic 57.25 GB Online
57.25 GB Unallocated
Disk 3 Dynamic 57.25 GB Online
57.25 GB Unallocated
Unallocated Primary Partition Extended Partition Logical Drive
Start
untitled - Paint
Administrative Tools
Computer Management
8:29 PM

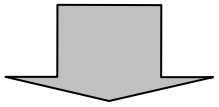
Figure 2-4-18 Create Volume

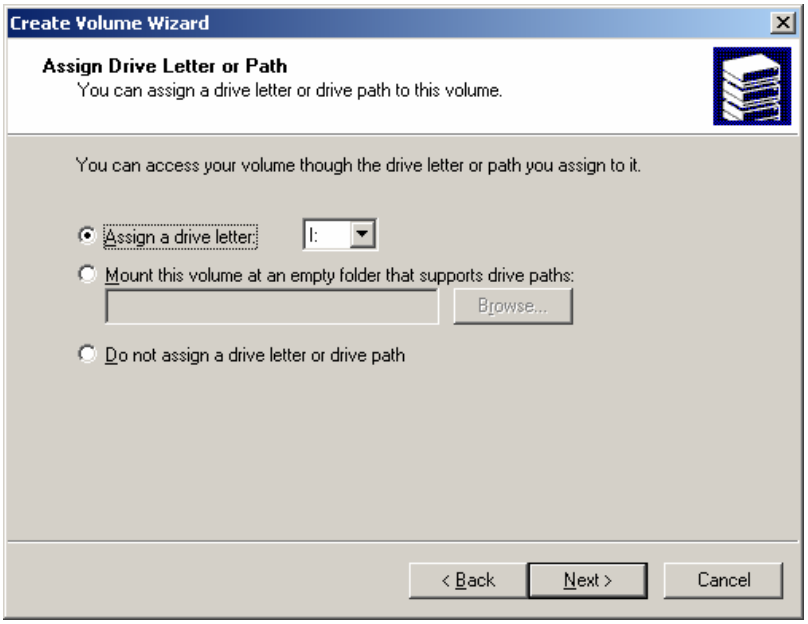

Create Volume Wizard
Welcome to the Create Volume Wizard
This wizard helps you create volumes on dynamic disks.
A volume is a portion of one or more hard disk drives that is treated as a separate disk. You can format a volume with a file system. You gain access to a volume through a drive letter or mount point.
To continue, click Next
< Back
Next >
Cancel

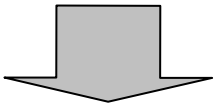

Create Volume Wizard
Select Volume Type
What type of volume do you want to create?
Volume type
Simple volume
Spanned volume
Striped volume
Description
A simple volume is made up of free space on a single dynamic disk. Create a simple volume if you have enough free disk space for your volume on one disk. You can extend a simple volume by adding free space from the same disk or another disk.
< Back
Next >
Cancel

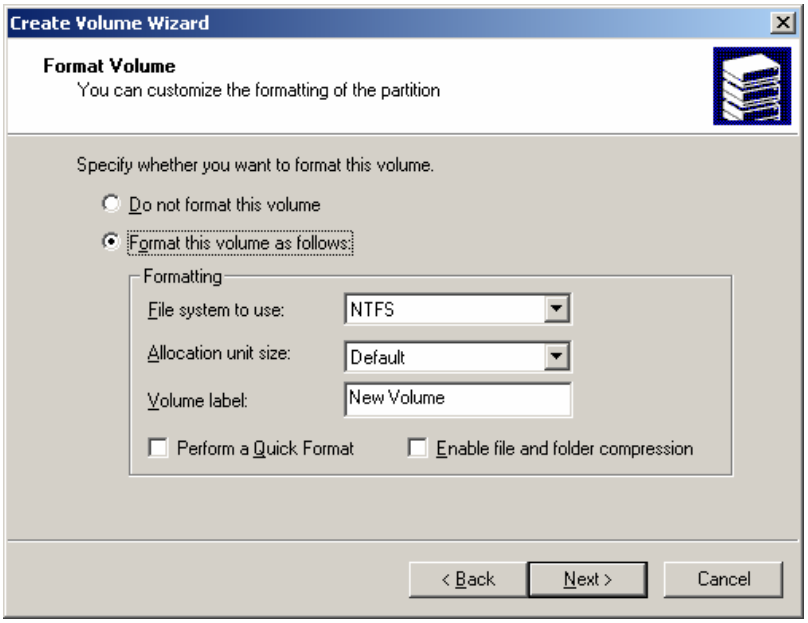


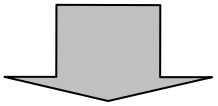

Create Volume Wizard
Select Disks
You can select the disks and set the disk size for this volume.
Select only one disk.
All available dynamic disks:
Disk 2
Disk 3
Add >>
<< Remove
<< Remove All
Selected dynamic disks:
Disk 1
Total volume size:
12000 MB
Size
For selected disk:
12000
MB
Maximum:
58620 MB
< Back
Next >
Cancel

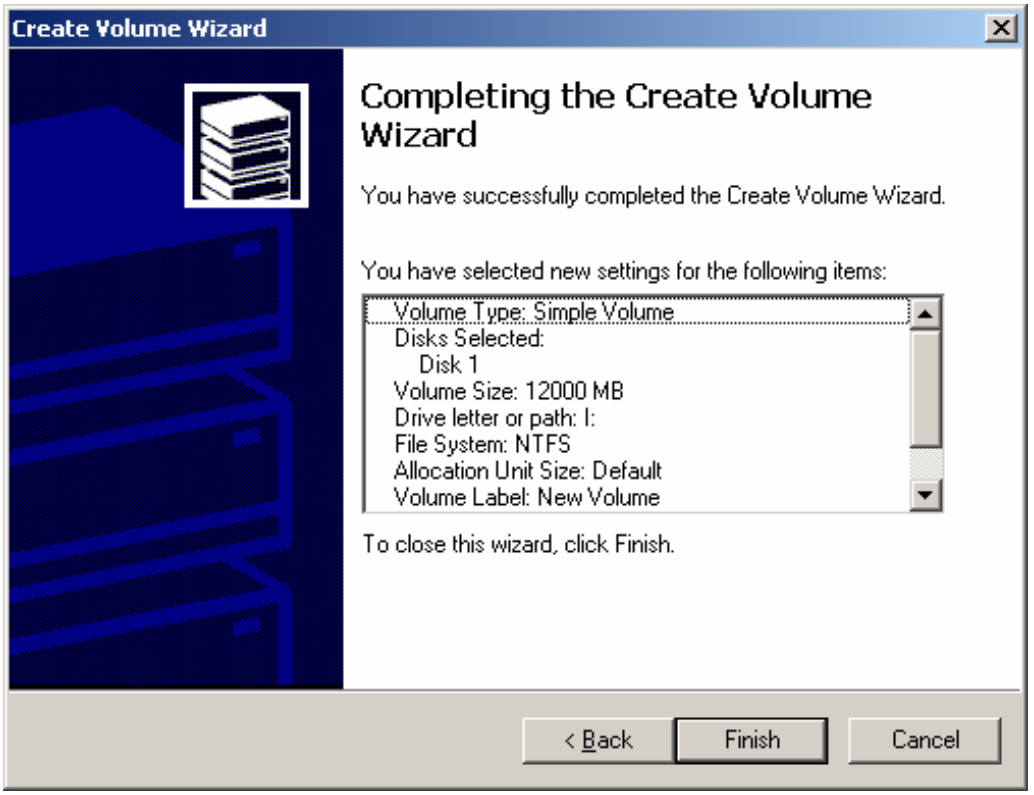



Create Volume Wizard
Assign Drive Letter or Path
You can assign a drive letter or drive path to this volume.
You can access your volume though the drive letter or path you assign to it.
Assign a drive letter:
I:
Mount this volume at an empty folder that supports drive paths:
Browse...
Do not assign a drive letter or drive path
< Back
Next >
Cancel




Create Volume Wizard
Format Volume
You can customize the formatting of the partition
Specify whether you want to format this volume.
Do not format this volume
Format this volume as follows:
Formatting
File system to use:
NTFS
Allocation unit size:
Default
Volume label:
New Volume
Perform a Quick Format
Enable file and folder compression
< Back
Next >
Cancel





<NOTE for HDD partition >

In case of that additional backup media is installed in NetSafe-DVR, Windows2000 would recognize your backup media as an ordinary data recording HDD. Not like Windows'98, part of backup media(IEEE1394) can be recognized as fixed HDD in Windows2000, and this makes problem that system records data at backup media.

You cannot record data if a device(such as CD-RW) mixed with HDD.

To prevent this, rename the label of a device that you would use as backup media as 'backup', and use other name or leave it empty on each HDD partition.

2.5. Install & Reinstall NetSafe-DVR Program

Follow next steps when you upgrade Operating System or need new installation.

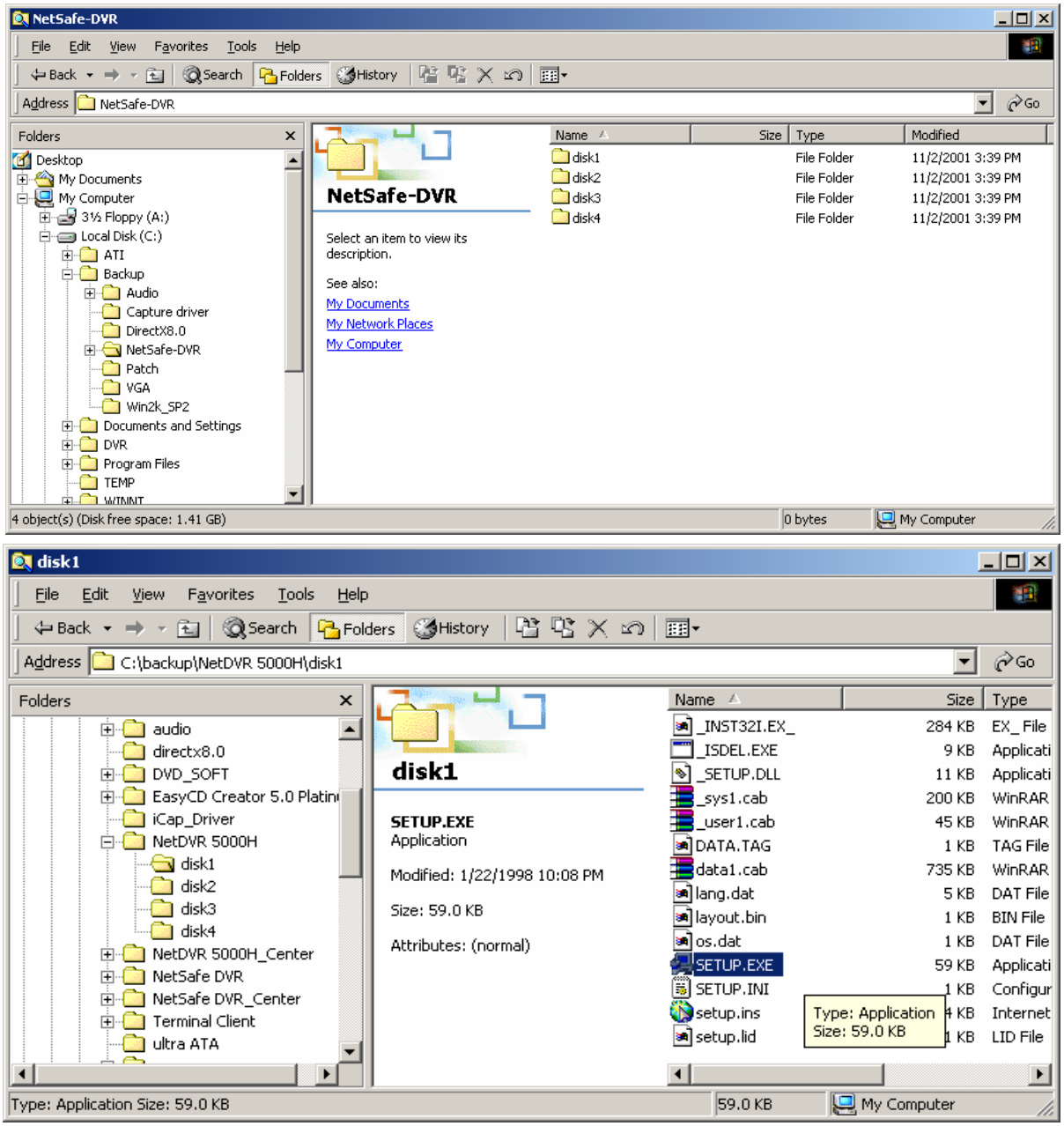
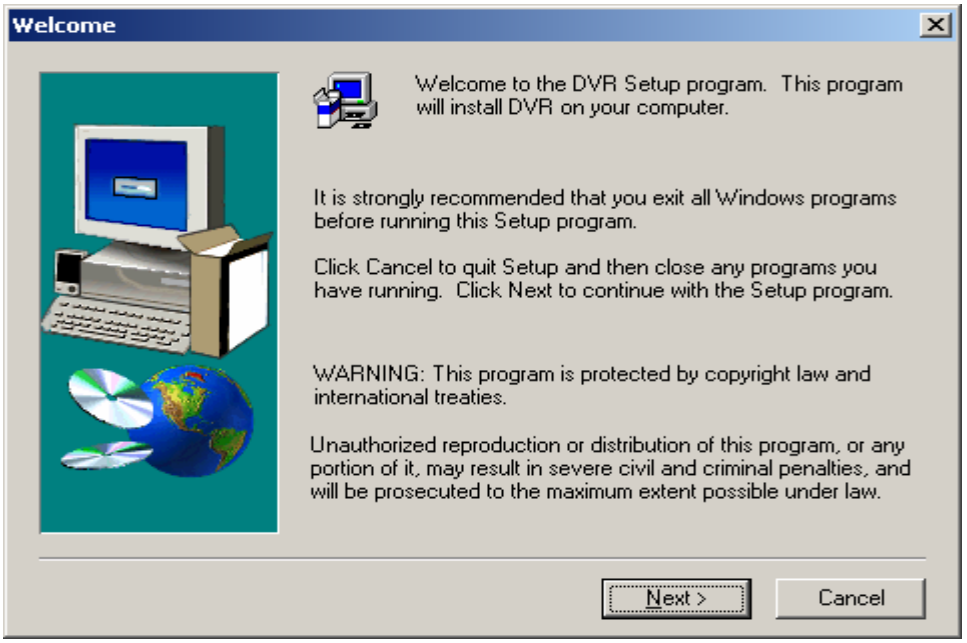
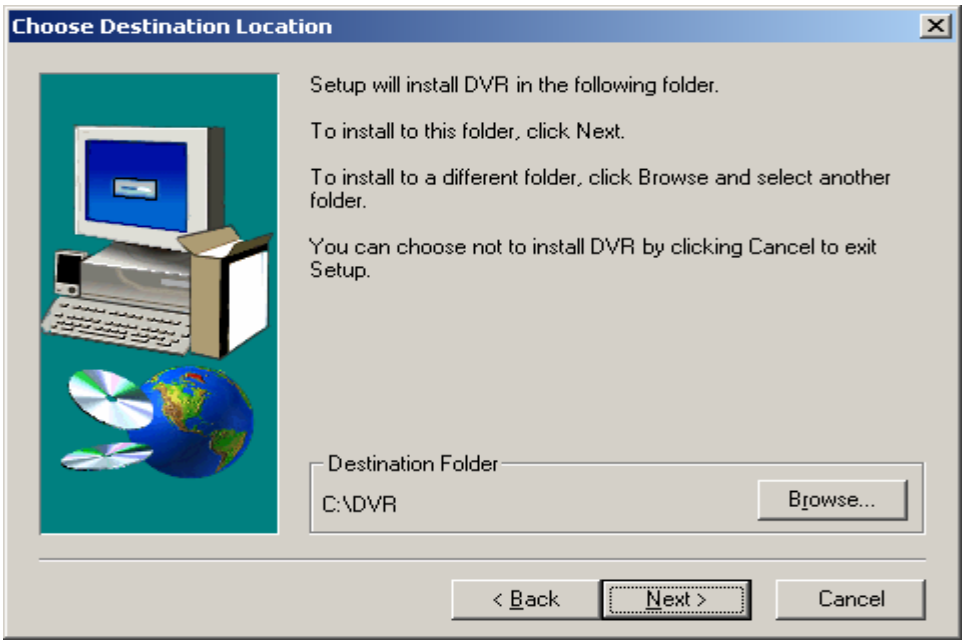
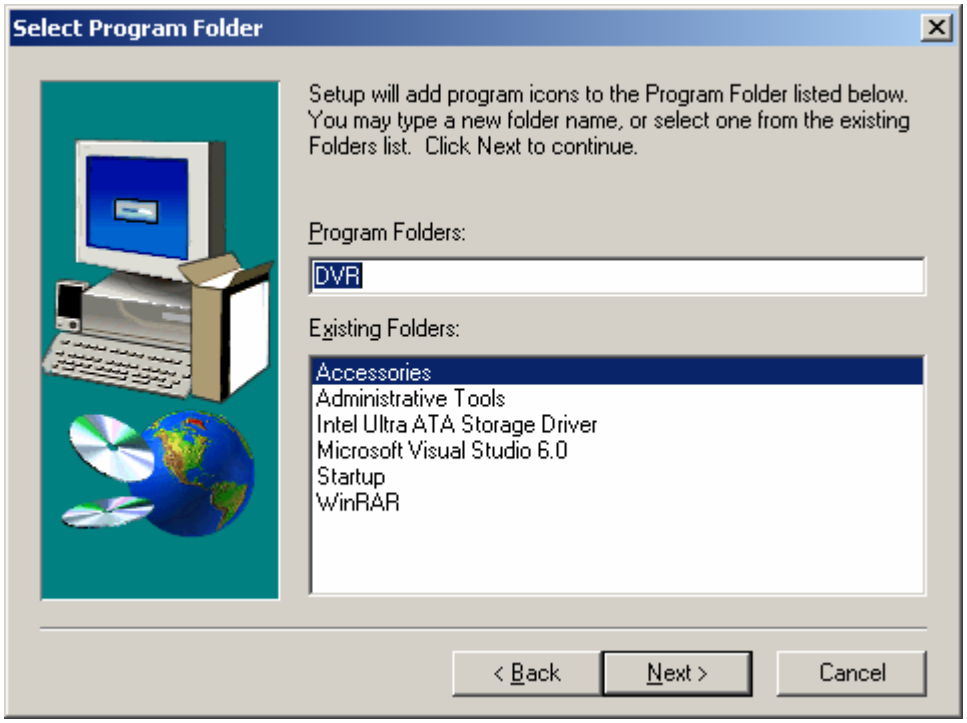


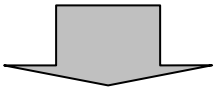
Figure 2-5-1 Install program folder

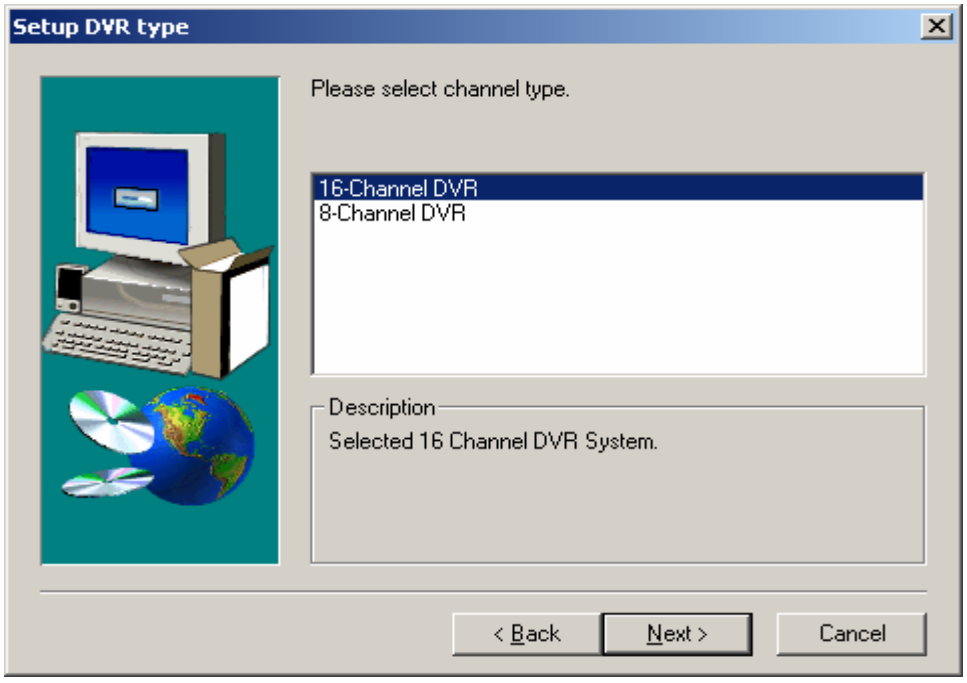
Finish NetSafe-DVR program by using Ctrl+Alt+Shift+F4 keys, and then double click Setup.exe like Figure[2-5-1].

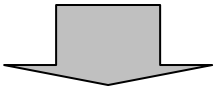

Welcome
Welcome to the DVR Setup program. This program will install DVR on your computer.
It is strongly recommended that you exit all Windows programs before running this Setup program.
Click Cancel to quit Setup and then close any programs you have running. Click Next to continue with the Setup program.
WARNING: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties, and will be prosecuted to the maximum extent possible under law.
Next >
Cancel

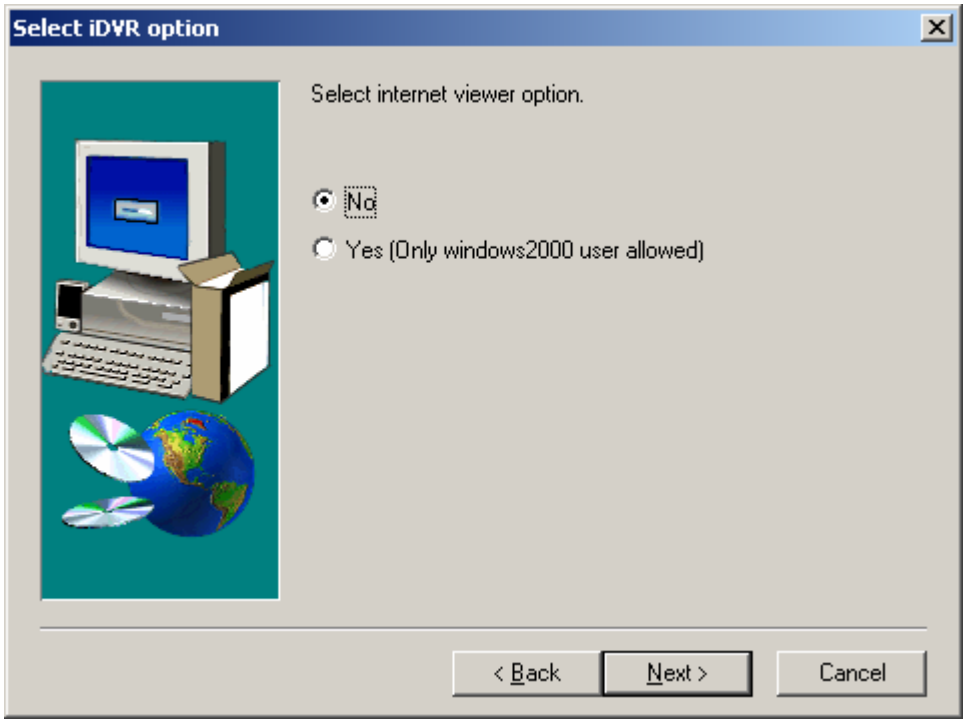

Choose Destination Location
Setup will install DVR in the following folder.
To install to this folder, click Next.
To install to a different folder, click Browse and select another folder.
You can choose not to install DVR by clicking Cancel to exit Setup.
Destination Folder
C:\DVR
Browse...
< Back
Next >
Cancel

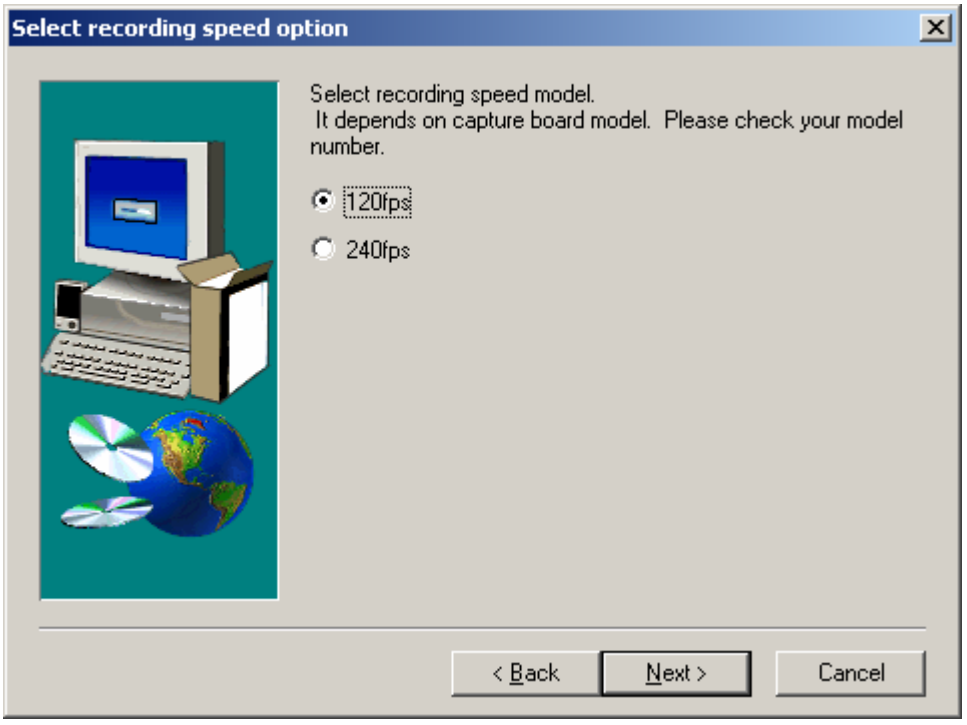

Select Program Folder
Setup will add program icons to the Program Folder listed below. You may type a new folder name, or select one from the existing Folders list. Click Next to continue.
Program Folders:
DVR
Existing Folders:
Accessories
Administrative Tools
Intel Ultra ATA Storage Driver
Microsoft Visual Studio 6.0
Startup
WinRAR
< Back
Next >
Cancel

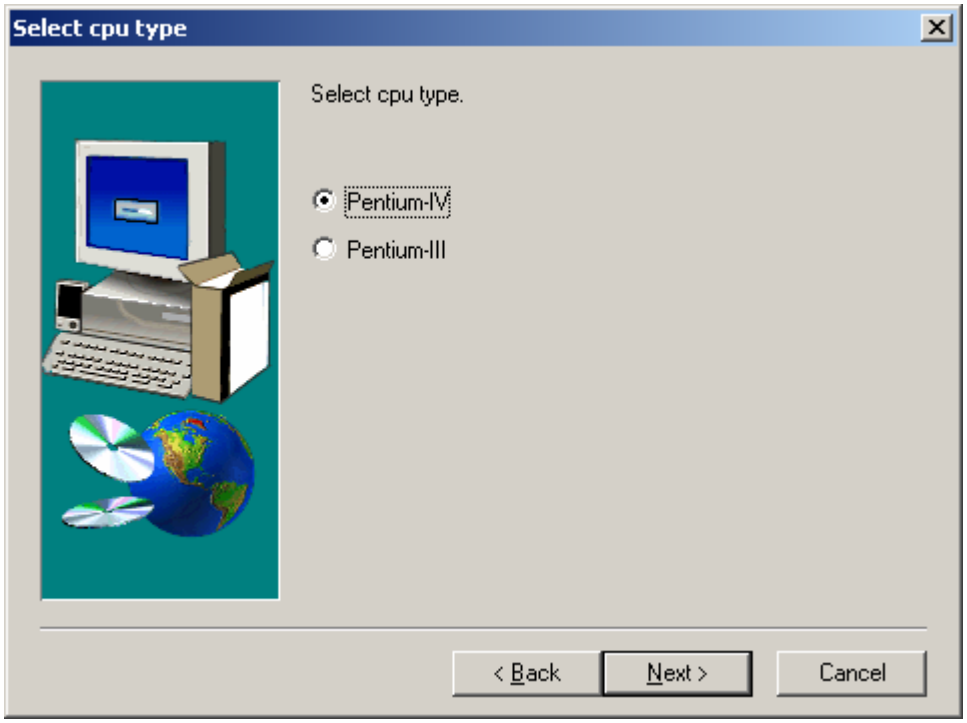


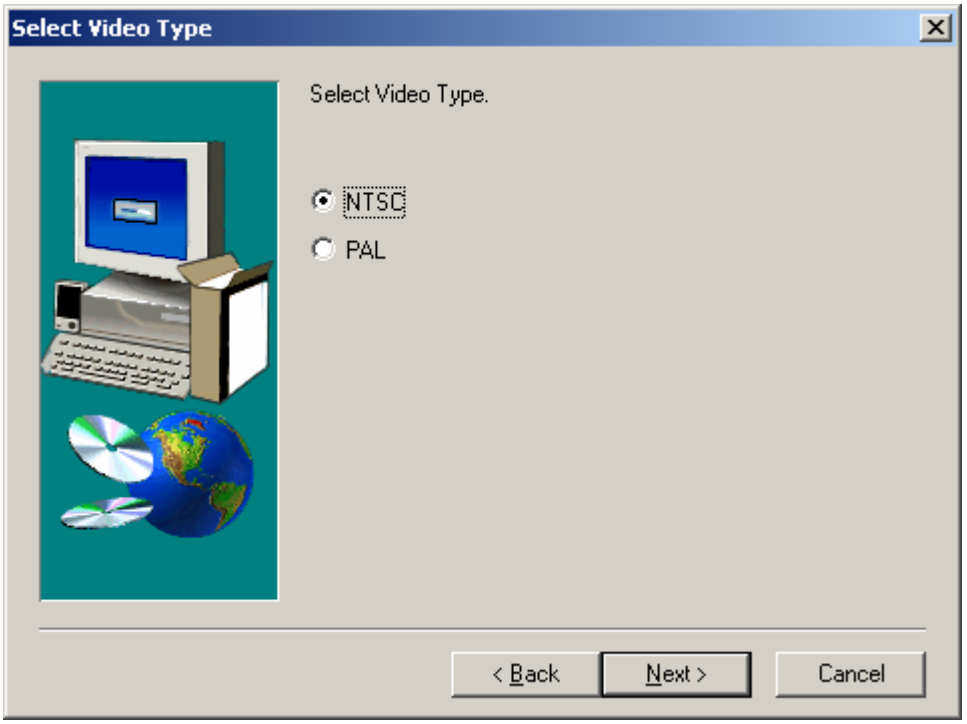

Setup DVR type
Please select channel type.
16-Channel DVR
8-Channel DVR
Description
Selected 16 Channel DVR System.
< Back
Next >
Cancel

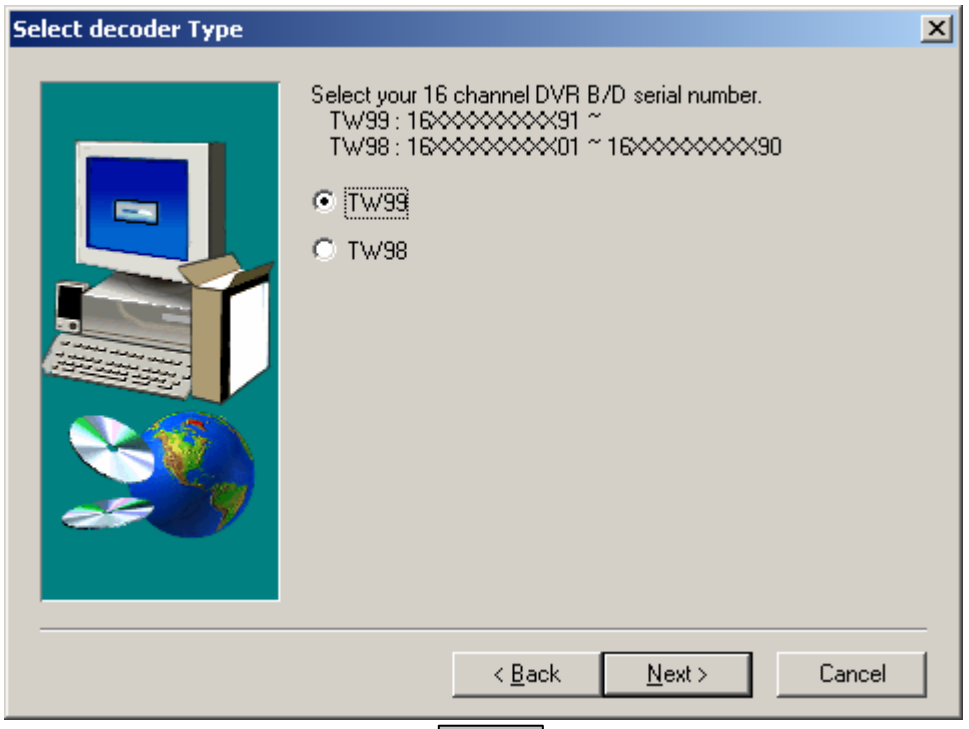


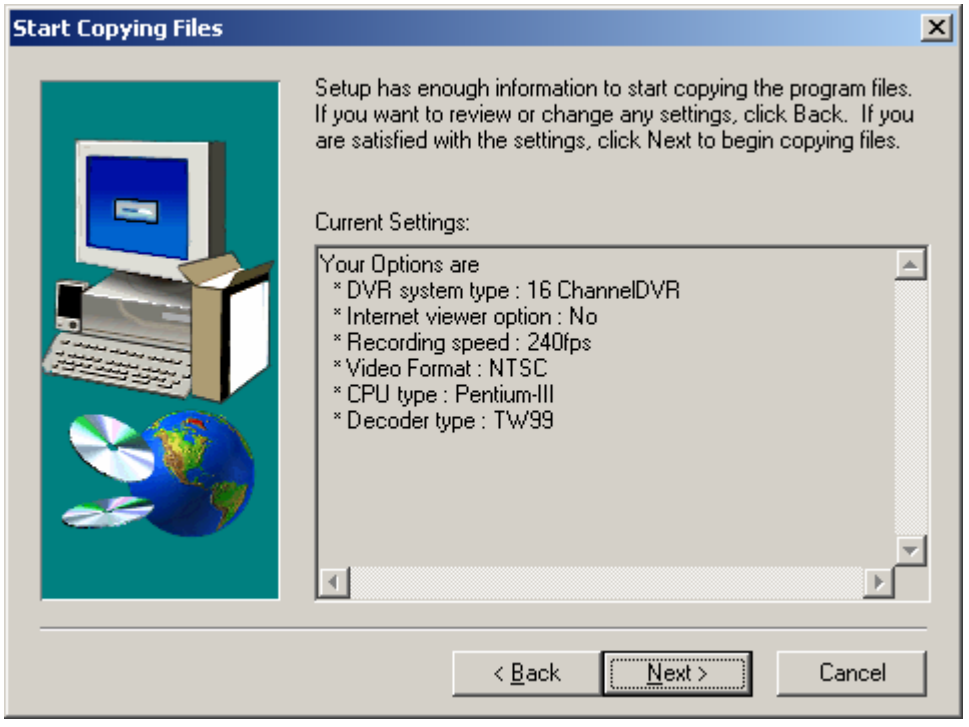

Select iDVR option
Select internet viewer option.
No
Yes (Only windows2000 user allowed)
< Back
Next >
Cancel

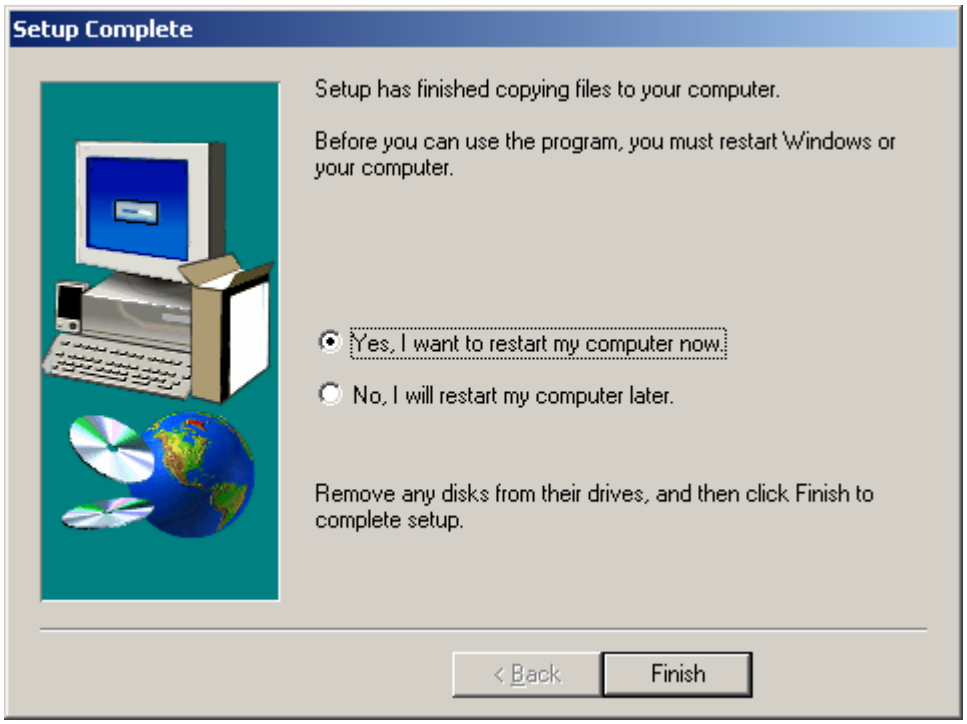

Select recording speed option
Select recording speed model.
It depends on capture board model. Please check your model number.
120fps
240fps
< Back
Next >
Cancel


Select cpu type
Select cpu type.
Pentium-IV
Pentium-III
< Back
Next >
Cancel


Select Video Type
Select Video Type.
NTSC
PAL
< Back
Next >
Cancel


Select decoder Type
Select your 16 channel DVR B/D serial number.
TW99 : 16XXXXXXXXX91 ~
TW98 : 16XXXXXXXXX01 ~ 16XXXXXXXXX90
TW99
TW98
< Back
Next >
Cancel


Start Copying Files
Setup has enough information to start copying the program files.
If you want to review or change any settings, click Back. If you
are satisfied with the settings, click Next to begin copying files.
Current Settings:
Your Options are
* DVR system type : 16 ChannelDVR
* Internet viewer option : No
* Recording speed : 240fps
* Video Format : NTSC
* CPU type : Pentium-III
* Decoder type : TW99
< Back
Next >
Cancel


Setup Complete
Setup has finished copying files to your computer.
Before you can use the program, you must restart Windows or your computer.
Yes, I want to restart my computer now.
No, I will restart my computer later.
Remove any disks from their drives, and then click Finish to complete setup.
< Back
Finish

* You should restart NetSafe-DVR program after installing NetSafe-DVR program.

When you upgrade program, first you should delete installed program, and then install new program. Following steps are about how to delete installed program.

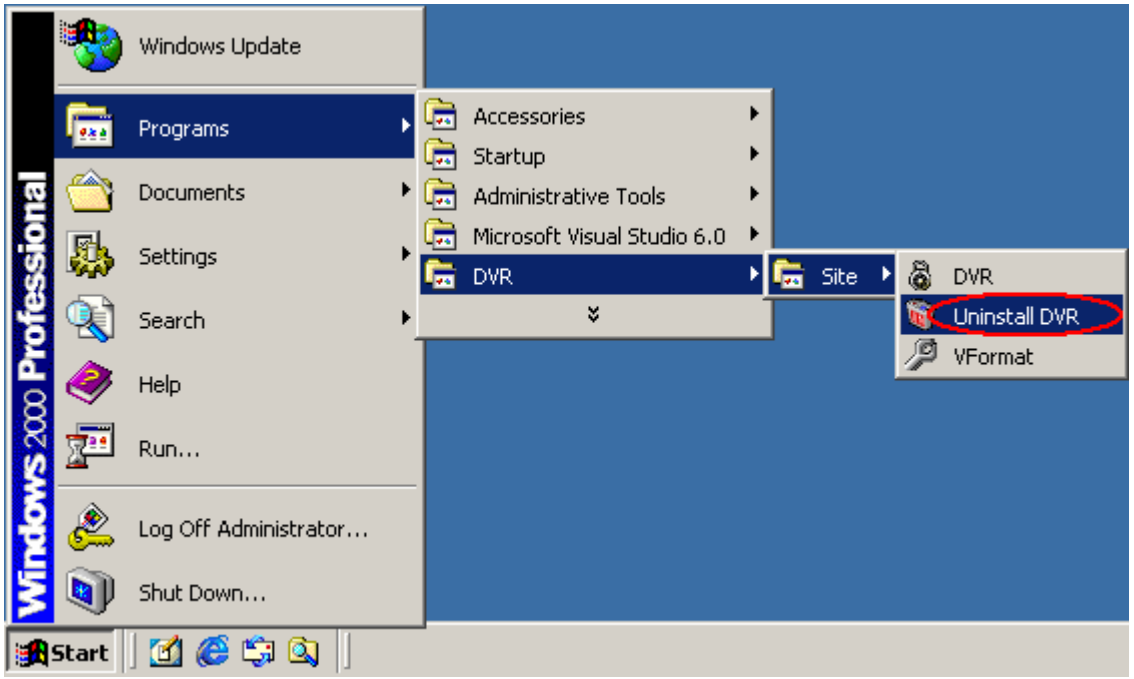
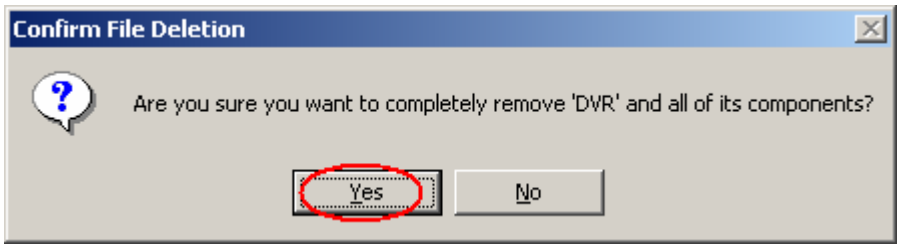
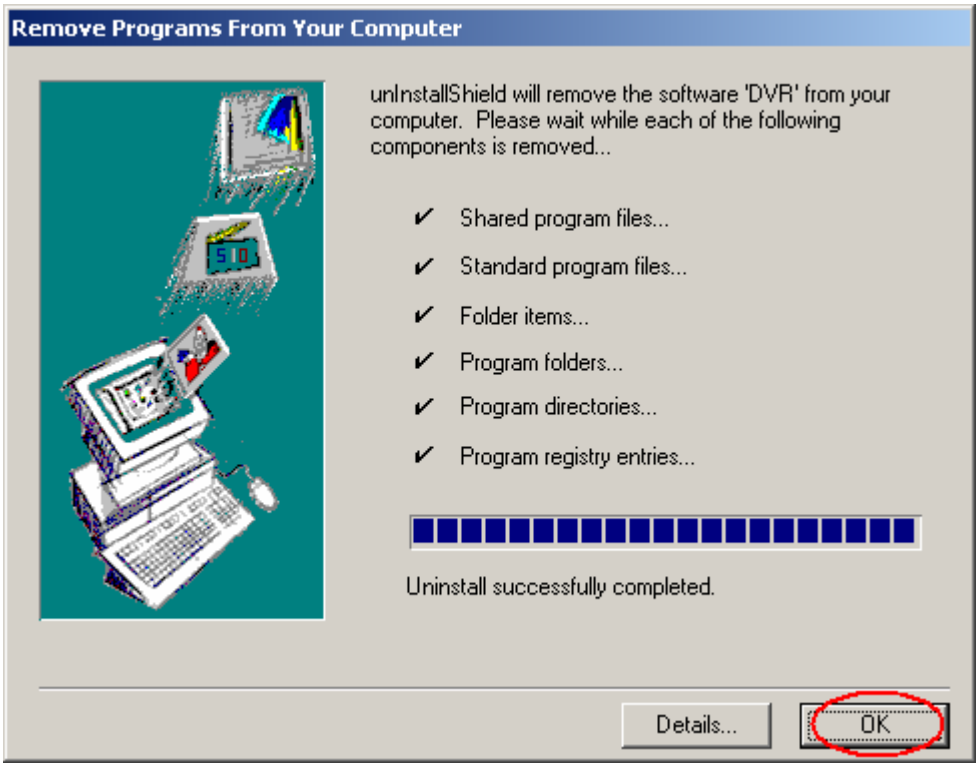
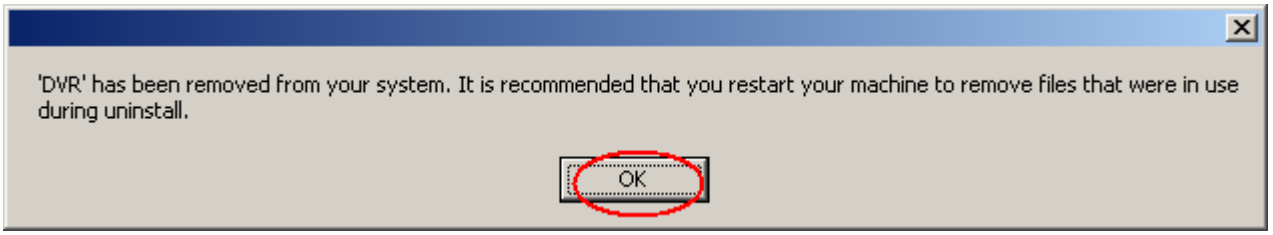


Figure 2-5-2 Uninstall Program




Remove Programs From Your Computer
unInstallShield will remove the software 'DVR' from your computer. Please wait while each of the following components is removed...
✔ Shared program files...
✔ Standard program files...
✔ Folder items...
✔ Program folders...
✔ Program directories...
✔ Program registry entries...
Uninstall successfully completed.
Details...
OK


'DVR' has been removed from your system. It is recommended that you restart your machine to remove files that were in use during uninstall.
OK

You should restart your system after uninstall.
When you try to upgrade your system without restarting, error message would be shown that you have to restart your system, the program would not be installed.

3. System Algorithm

For your better understanding overall system, this part explains overall NetSafe-DVR system, data flow, algorithm of H/W and S/W.

3.1. System Data Flow

This system converts analog signal of camera to digital data, and then records it into HDD by using MJPEG compression algorithm.
For playback stored data, first decompress stored data and then it is played by using VGA card.

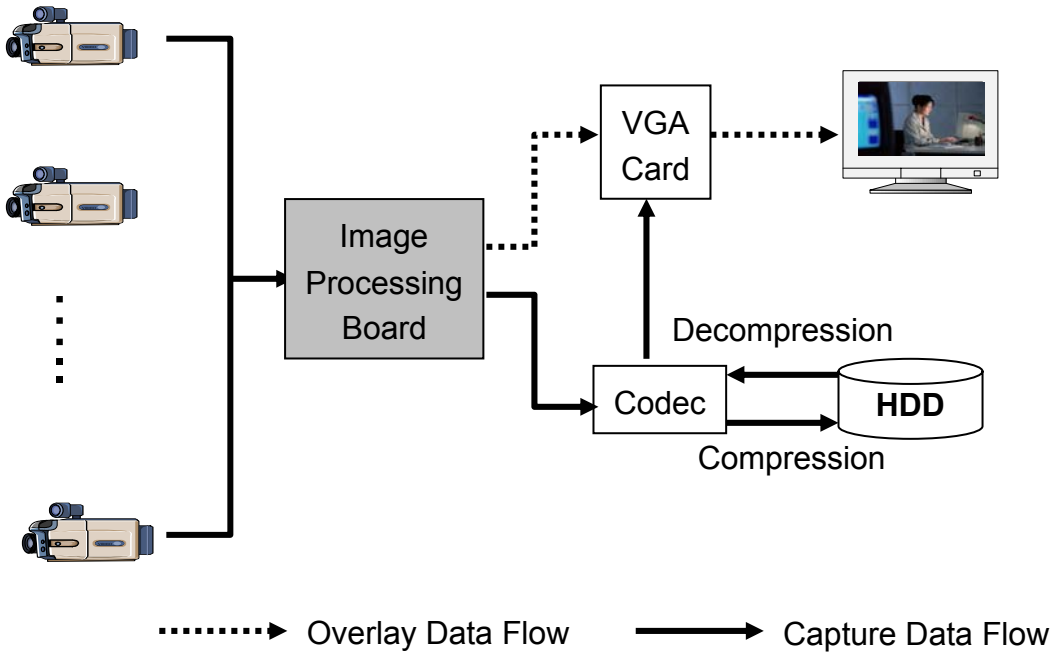
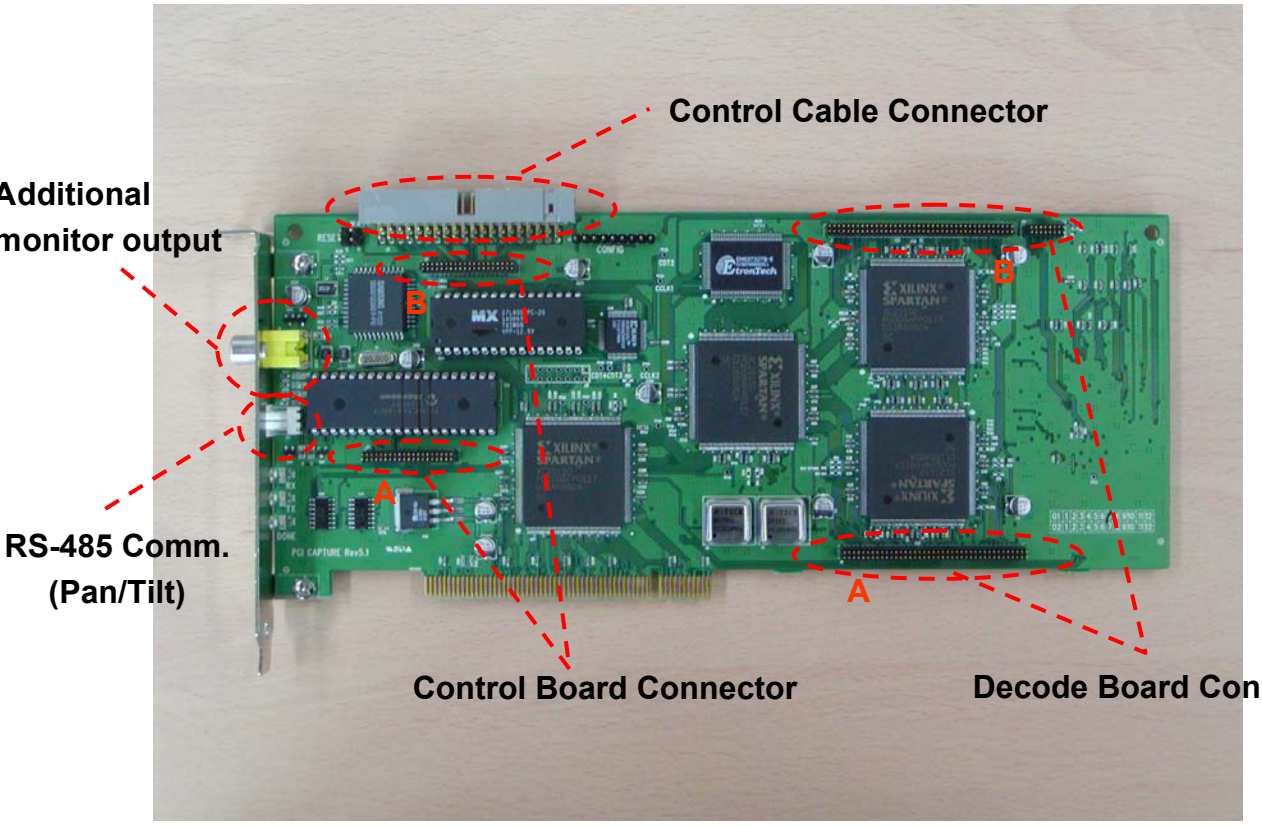


Figure 3-1 Data Flow

3.2. Image Processing Board

This board converts analog image data to digital data, and then send it to memory by system data bus, and recorded into HDD after CODEC calculated compressing process. Following are the functions of this board.

* Image Overlay
* Image Capture
* Sensor & controller I/O
* RS-485 communication(Pan/Tilt)
* Watchdog
* Additional monitor output.



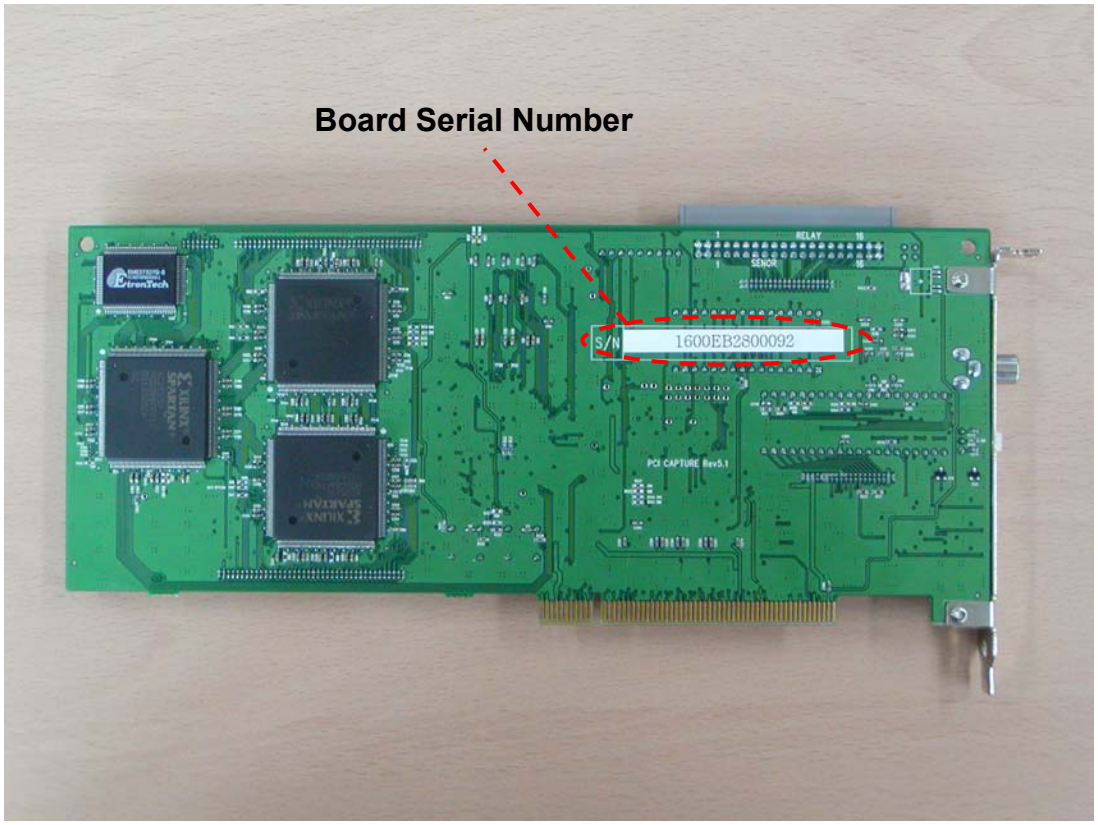


Figure 3-2 Image Processing Board (Main Board)

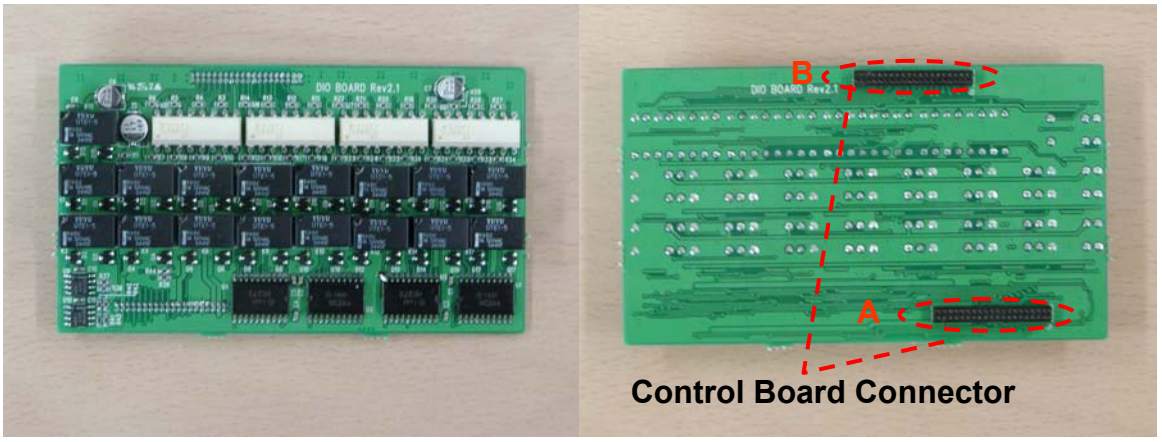


Figure 3-3 Control Board

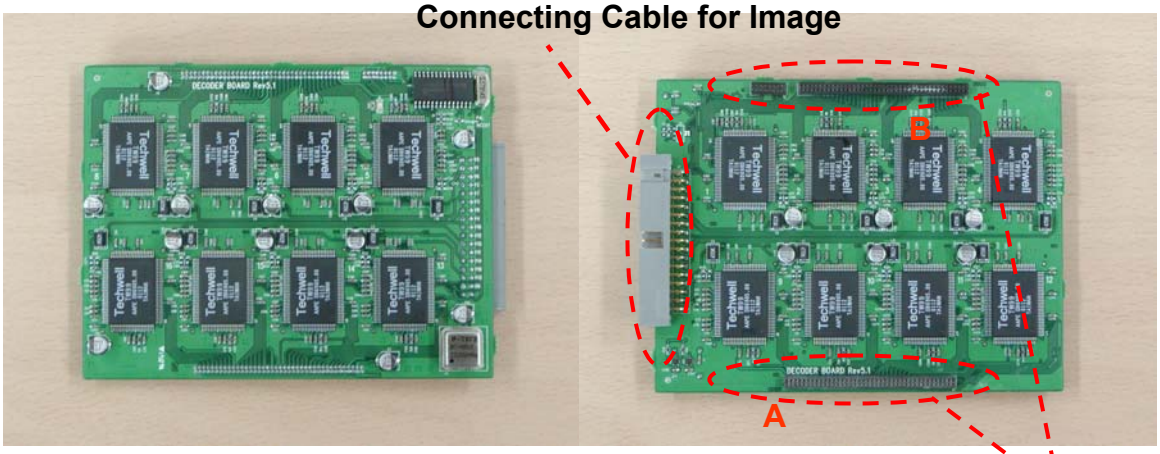


Figure 3-4 Decorder Board

To assemble each three kind of boards as you see the pictures on this page, make sure each connector carefully and connect it.(A->A, B->B)

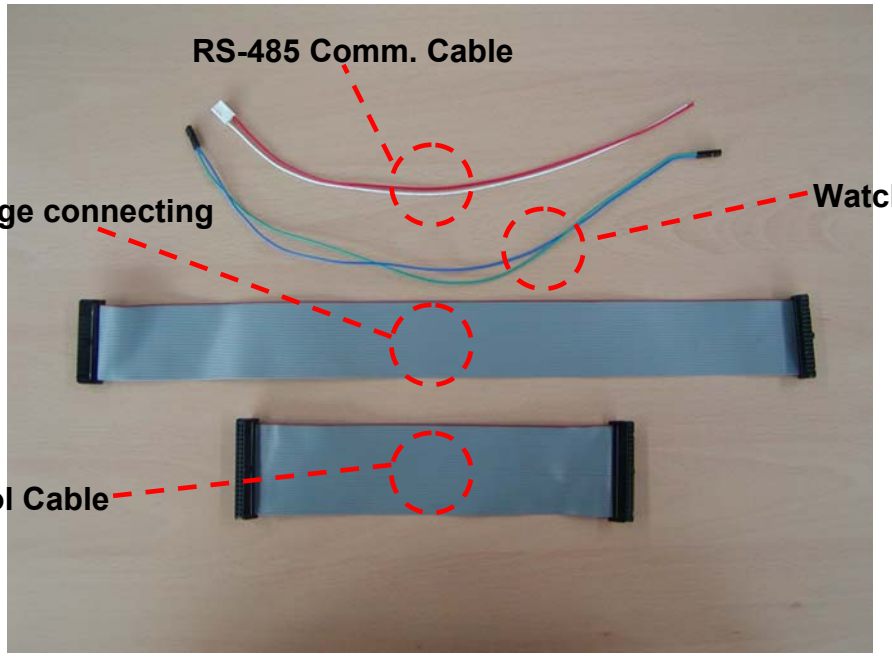


Figure 3-5 Connecting Cables

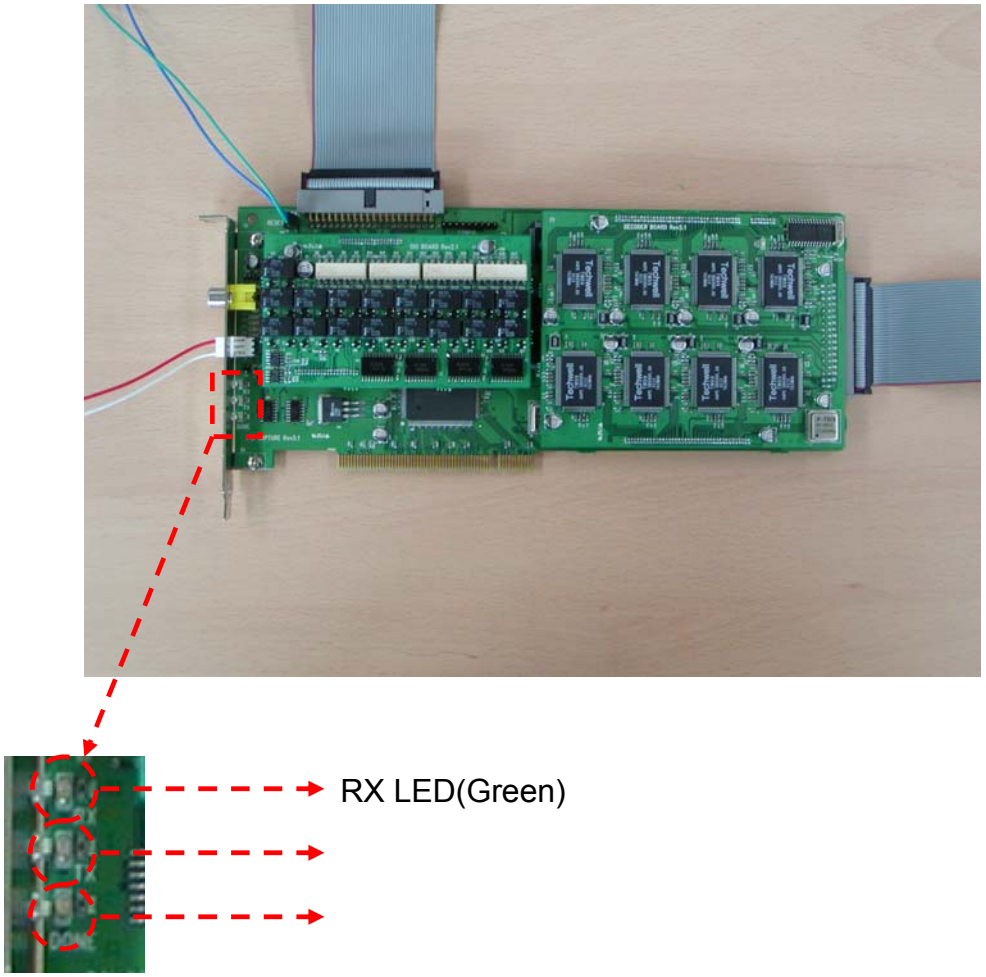


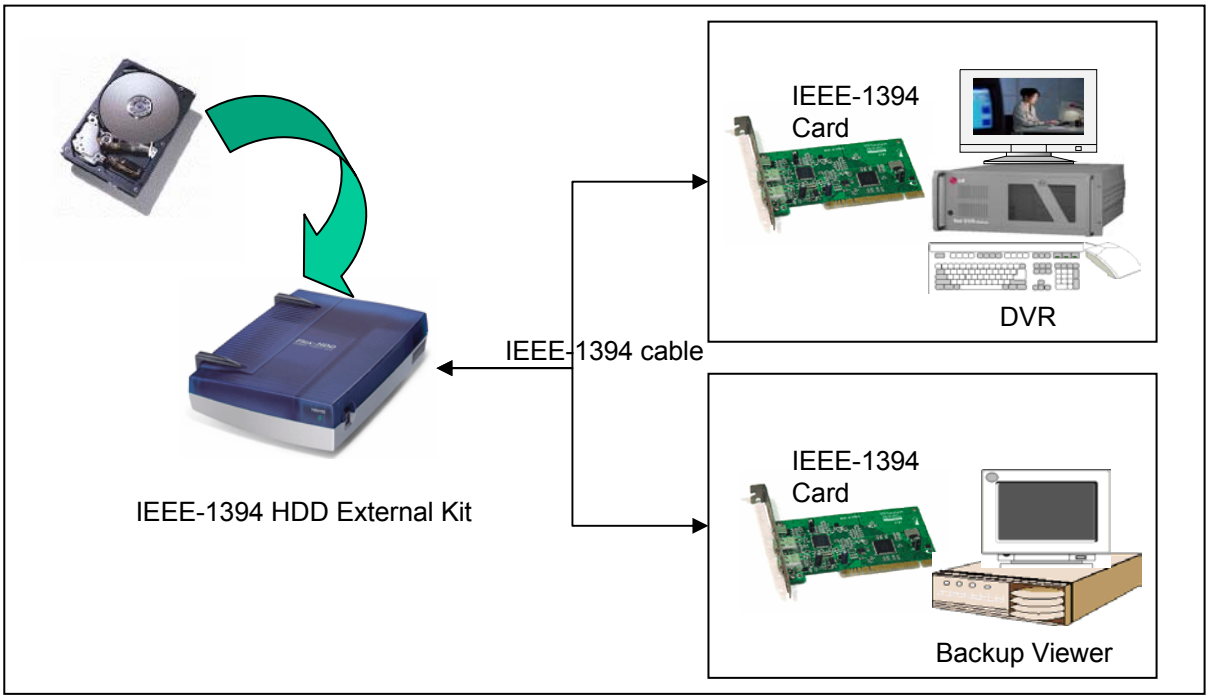
Figure 3-6 After connect each board

4. Backup Storage Setting

With using some backup devices, user can increases efficiency in recording data. As backup devices there are CD-RW, DAT, DVD-RAM, IEEE1394 and verify the stored data by using backup viewer.

4.1 IEEE-1394 Backup Media

4.1.1 IEEE-1394 system architecture



Specification

1. Host Bus : PCI Local Bus, V.2.1
2. Hot-swap supported
3. Device interface : IEEE 1394 (Firewire)
4. Maximum Data transfer rate : 400 Mbps
5. Connector : 2 of 6-pin port
6. Cable : 6pin - 6pin or 6pin - 4pin
7. Dimension (W X D) : 145mmX84mm
8. Operation temperature : 0 C ~ 55 C (10%~90% Humidity)
9. Supported OS : Windows 98SE, Windows ME, Windows 2000, Mac OS 8.6x

4.1.2. IEEE-1394 HDD & Cable Connect to NetSafe-DVR System

Your first IEEE-1394 HDD Kit's USB cable connect to NetSafe-DVR system like as a Fig.1-1. And second kit's USB cable connect to first IEEE-1394 HDD Kit.

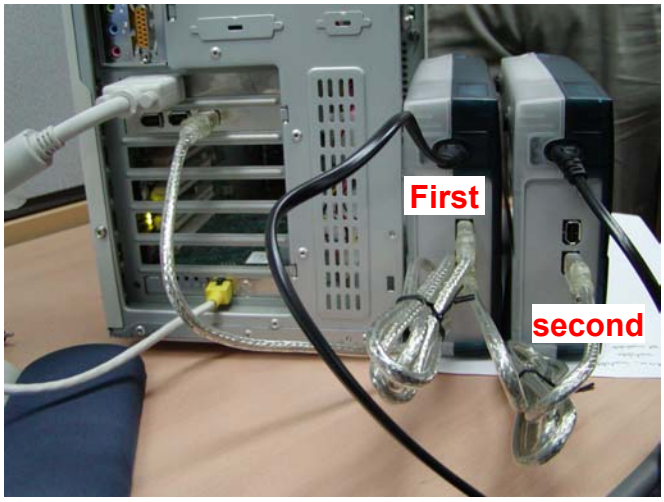


Figure 4-1

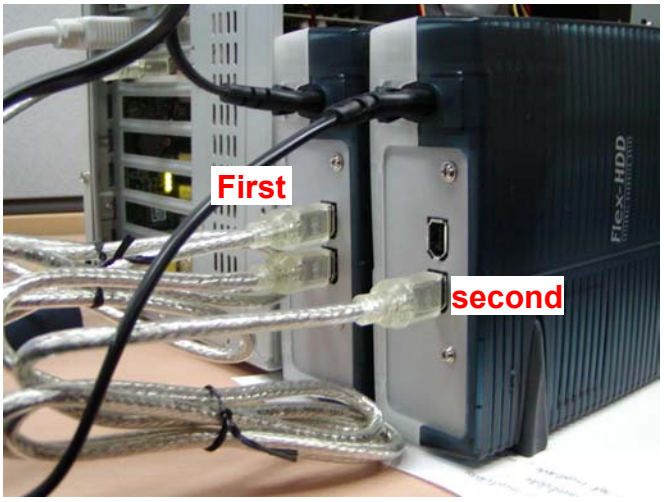


Figure 4-2

4.3. IEEE-1394 HDD Setting for Windows98SE

a. Restart NetSafe-DVR System.

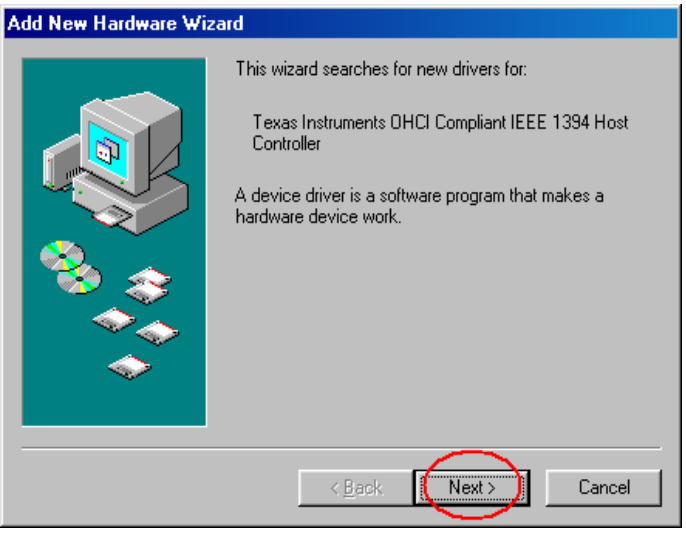

Add New Hardware Wizard
This wizard searches for new drivers for:
Texas Instruments OHCI Compliant IEEE 1394 Host Controller
A device driver is a software program that makes a hardware device work.
< Back
Next >
Cancel

Figure 4-3

Add New Hardware Wizard
What do you want Windows to do?
Search for the best driver for your device. (Recommended).
Display a list of all the drivers in a specific location, so you can select the driver you want.
< Back
Next >
Cancel

Figure 4-4

b. Insert your IEEE-1394 HDD Driver CD-ROM

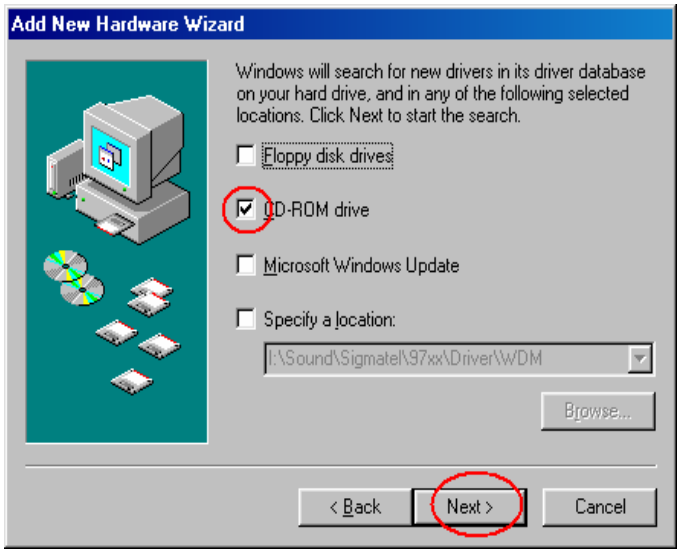

Add New Hardware Wizard
Windows will search for new drivers in its driver database on your hard drive, and in any of the following selected locations. Click Next to start the search.
Floppy disk drives
CD-ROM drive
Microsoft Windows Update
Specify a location:
I:\Sound\Sigmatel\97xx\Driver\WDM
Browse...
< Back
Next >
Cancel

Figure 4-5

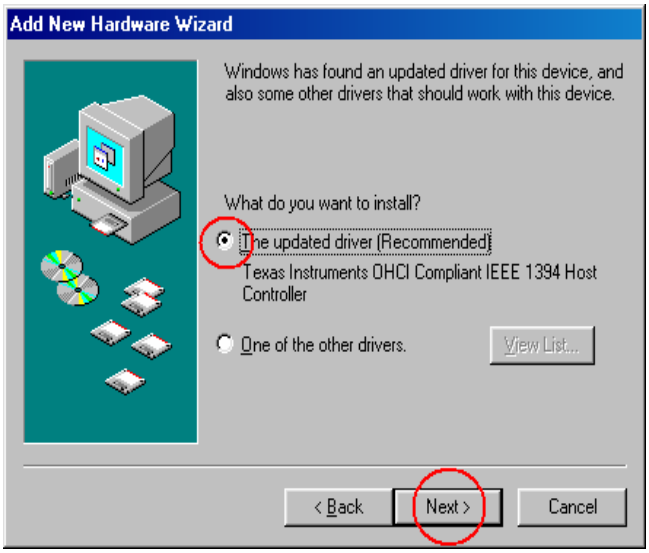

Add New Hardware Wizard
Windows has found an updated driver for this device, and also some other drivers that should work with this device.
What do you want to install?
The updated driver (Recommended)
Texas Instruments OHCI Compliant IEEE 1394 Host Controller
One of the other drivers.
View List...
< Back
Next >
Cancel

Figure 4-6

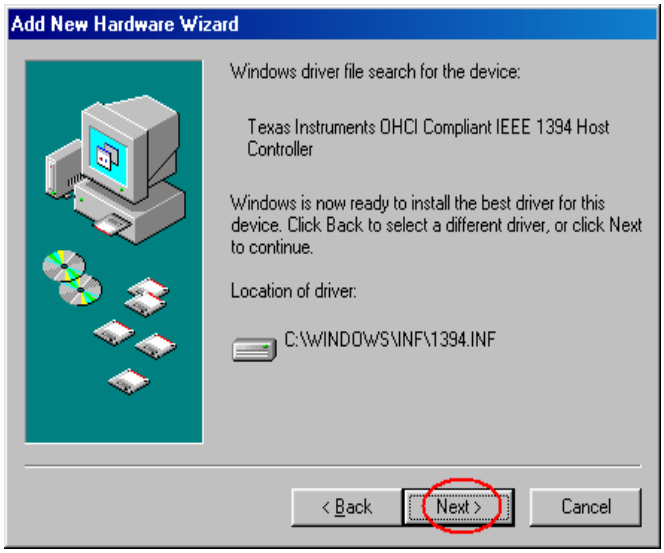

Add New Hardware Wizard
Windows driver file search for the device:
Texas Instruments OHCI Compliant IEEE 1394 Host Controller
Windows is now ready to install the best driver for this device. Click Back to select a different driver, or click Next to continue.
Location of driver:
C:\WINDOWS\INF\1394.INF
< Back
Next >
Cancel

Figure 4-7

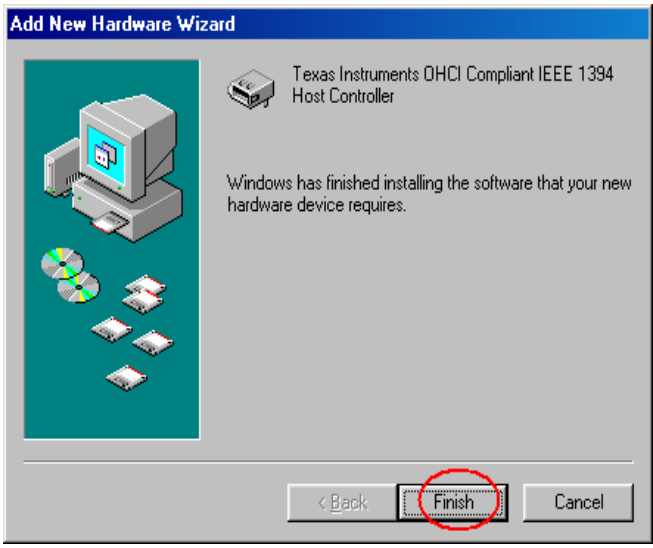

Add New Hardware Wizard
Texas Instruments OHCI Compliant IEEE 1394 Host Controller
Windows has finished installing the software that your new hardware device requires.
< Back
Finish
Cancel

Figure 4-8

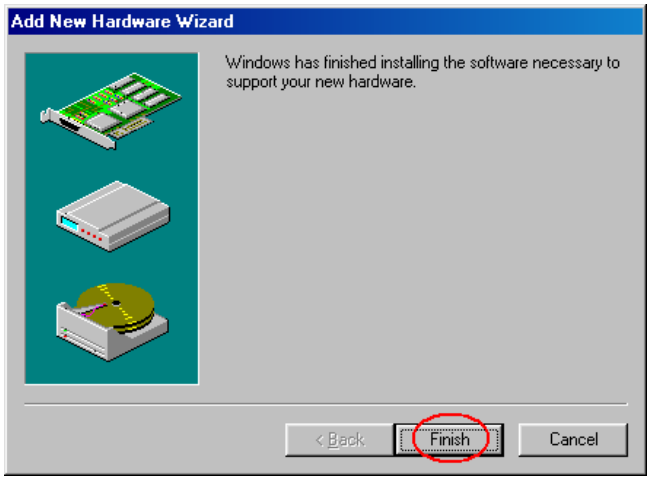

Add New Hardware Wizard
Windows has finished installing the software necessary to support your new hardware.
< Back
Finish
Cancel

Figure 4-9

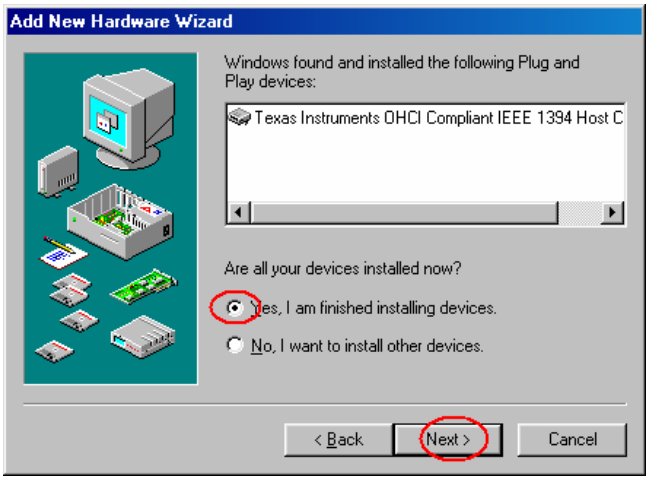

Add New Hardware Wizard
Windows found and installed the following Plug and Play devices:
Texas Instruments OHCI Compliant IEEE 1394 Host C
Are all your devices installed now?
Yes, I am finished installing devices.
No, I want to install other devices.
< Back
Next >
Cancel

Figure 4-10

c. **Windows** -> Set your IEEE-1394 HDD as “Removable Drive”

* Control Panel -> System -> IEEE-1394 HDD’s Properties

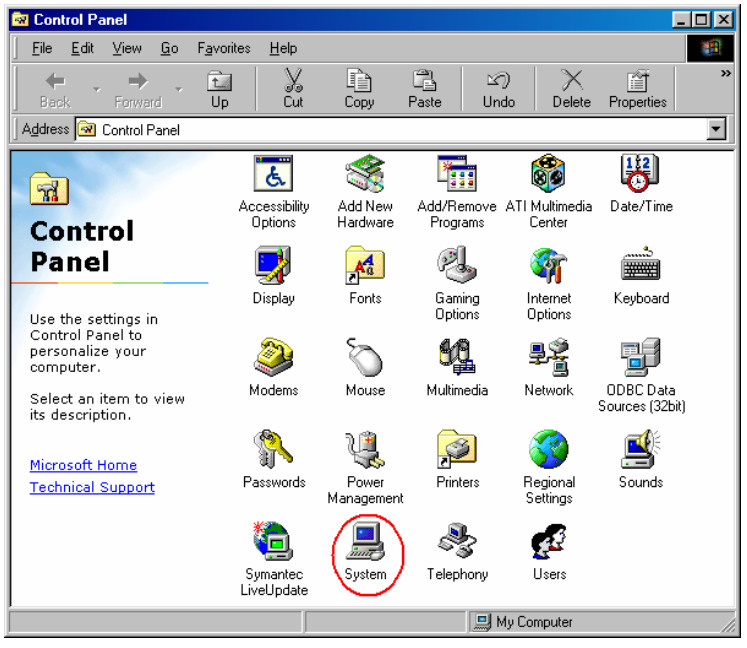


Figure 4-11

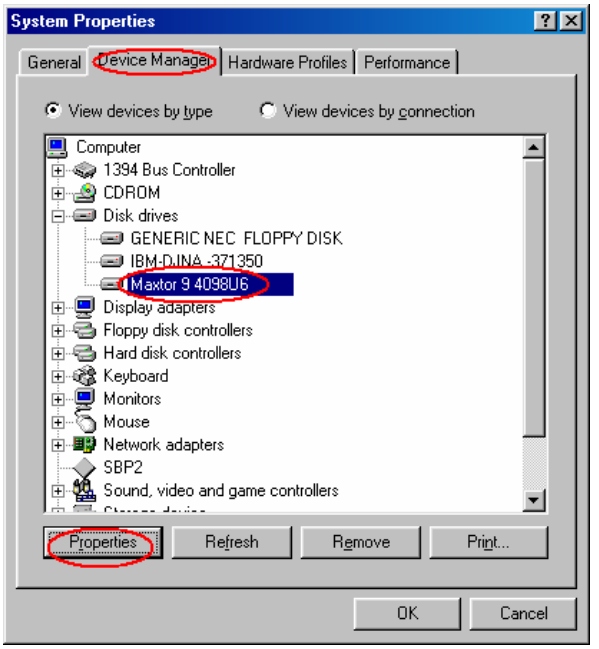


Figure 4-12

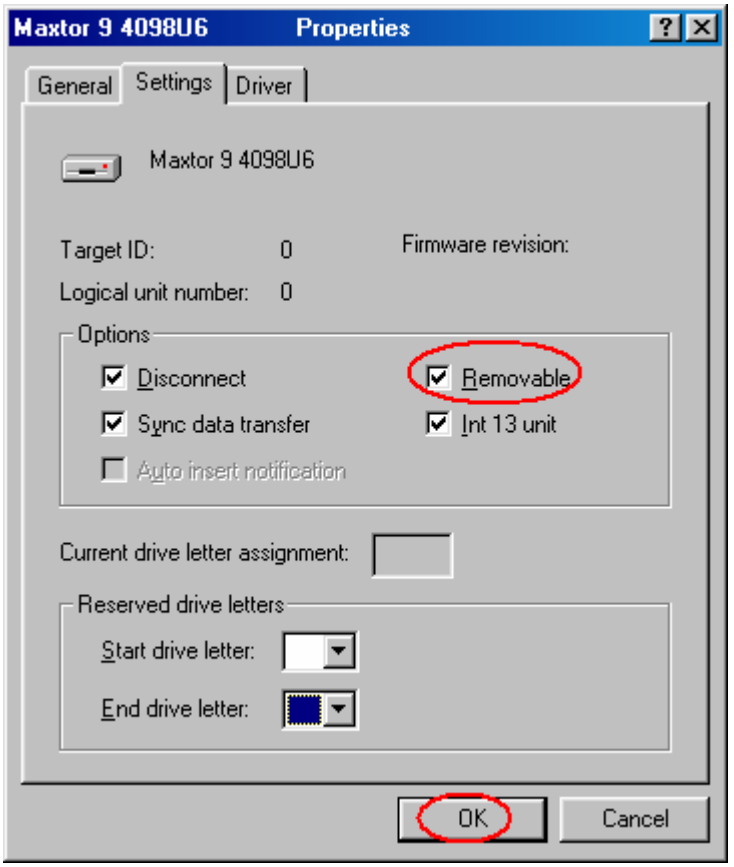


Figure 4-13

Checked ‘Removable’ option, and click OK. Then restart your System.

d. **Windows2000Professional**

* Explorer -> IEEE-1394 Volume Label name -> Rename ‘backup’
* Reason : Because Windows2000 professional do not recognize IEEE-1394 as a removable drive and user cannot set HDD as removable by force, NetSafe-DVR S/W recognizes backup drive, if volume label is named ‘backup’.

4.2. DVD-RAM Backup Media

4.2.1 DVD-RAM Specification

Specification

Model : LF-D211V

Specification : Built in EIDE/ATAPI , 4.7GB DVD-RAM, 2X/6X/24X

Model Name		LF-D211N(ATAPI)
Data Capacity	DVD-RAM	4.7Gbyte/9.4Gbyte
	DVD-ROM	4.7Gbyte(Single) / 8.5Gbyte(dual)
Interface		ATA/ ATAPI-4
Data Transfer Rate	PIO mode4 Ultra DMA mode2	16.6Mbyte/sec 33.3Mbyte/sec
Data Transfer Rate (Sustained)	DVD-RAM(2.6GB) DVD-RAM(4.7GB) DVD-ROM CD-ROM	1,385Kbyte/sec 2,770Kbyte/sec Max 8,310 Kbyte/sec(6X) Max 3,600 Kbyte/sec(24X)
Error Rate	DVD-RAM DVD-ROM	Less than 10-12 Less than 10-12
Power Requirements	Voltage	DC +5V DC +12V
Environmental Temperature	Operating Storage	5~45C -20~50C
Relative Humidity	Operating Storage	10~80% 5~90%
Dimensions		146.0(W) x 41.3(H) x 196(D) mm

4.2.2 DVD-RAM Test

Testing Environment

* System Environment

- CPU : Intel Pentium III 866MHz, RAM : 128MB SDRAM
- Mother Board : GA-60XE(Intel 815EP), HDD : Segate 60GB,
- Graphic card : ATI rage 128Pro
- OS : Windows2000Professional

* NetSafe-DVR recording Environment

- 16CH, Normal, 5 Frame/Sec
- 2CH : 720x480, 2CH : 720x240, 12CH : 360X240

* Average recording rate of DVD-RAM

Test	Rec. Speed	Playback Speed
152MB(812files)	1.21MB/s	2.3MB/s
112MB(3files)	1.24MB/s	2.38MB/s

4.2.3 DVD-RAM Backup Test

5Frame/sec	NetSafe-DVR recording capacity	DVD-RAM recording capacity
1 Hour	3,442,953,829bytes(3.5GB)	3,694,198,784bytes(3.7GB)
24 Hours	82,630,891,896bytes(83GB)	88,660,770,816bytes(89GB)

Table 4-1 Recording capacity when there are a lot of motion.

* These records based on recording capacity in surveillance mode when there are **a lot of movements.**

* 60GB HDD : C(system,3GB), D(11GB), E(11GB), F(11GB), G(11GB), H(11GB), I(DVD-RAM. 4.7GB)
  - DVD-RAM 4.7GB backup -> 1 hour 16 minutes required.
  - Backup is performed unit of hour by backup media. When HDD's partition is divided like above, about 3 hours' data will be saved at each partition. So, it takes about 3 hours to backup a partition.

* Recording capacity on **a few movement** -> about 2.5 GB /1 hour

5Frame/sec	NetSafe-DVR recording capacity	DVD-RAM recording capacity
1 Hour	2,262,625,971bytes(2.3GB)	3,694,198,784bytes(3.7GB)
24 Hours	54,303,023,304bytes(55GB)	88,660,770,816bytes(89GB)

Table 4-2 Recording capacity test on minor movement change.

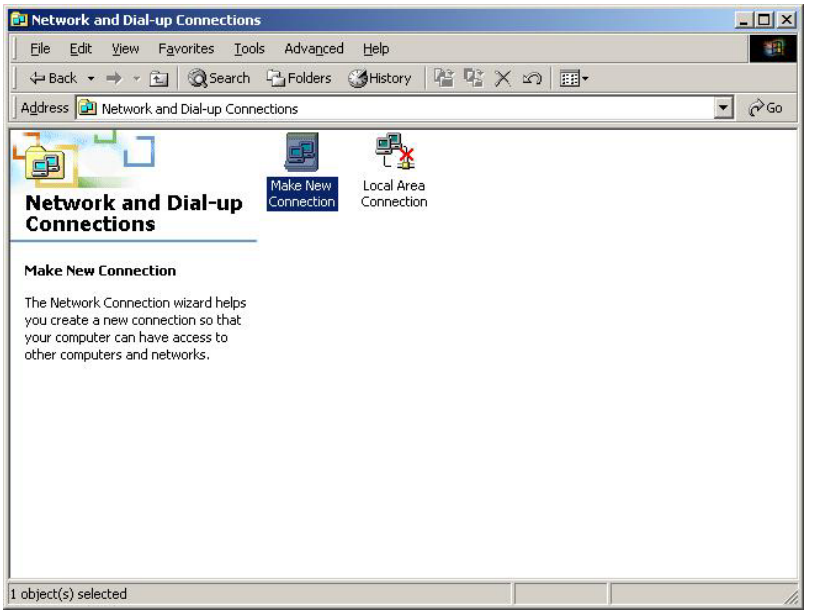
* NetSafe-DVR recording environment is same as when there is a lot of movement.

* 60GB HDD : C(system, 3GB), D(11GB), E(11GB), F(11GB), G(11GB), H(11GB), I(DVD-RAM. 4.7GB)
  - DVD-RAM 4.7GB backup -> 1 hour 16 minutes required
  - Hourly backup is performed by backup media. With using 4.7 GB backup media, you can store 2 hours data.
  - About 5 hours' data can be stored at each partition, it takes about 3 hours to backup a partition.

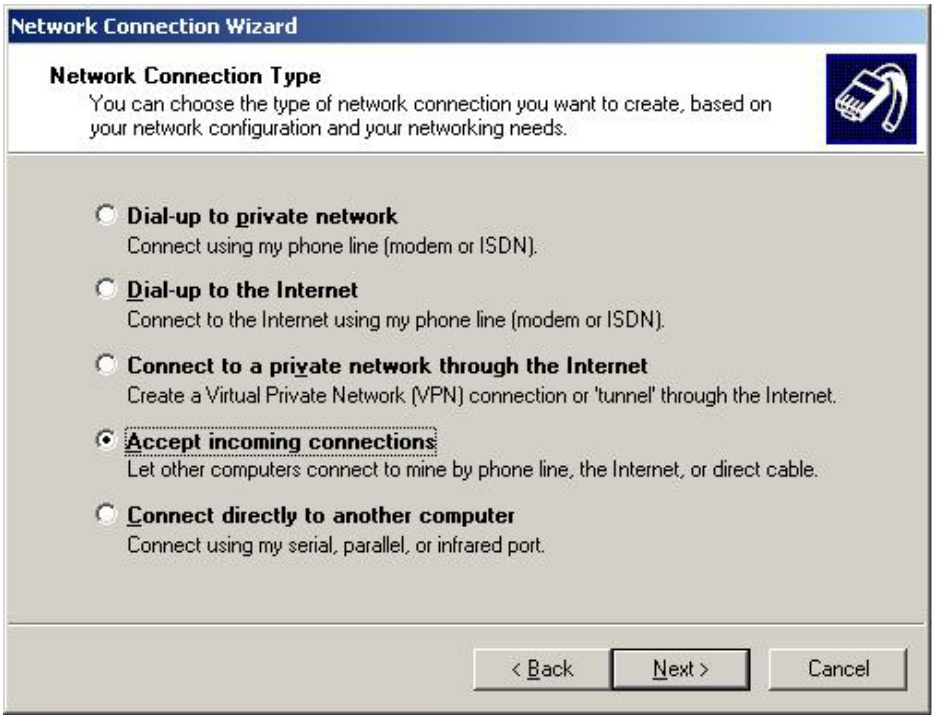
5.2.4. Make a Dial up Connection

1. Choose a 'Network and Dial-up Connections' at Control Panel

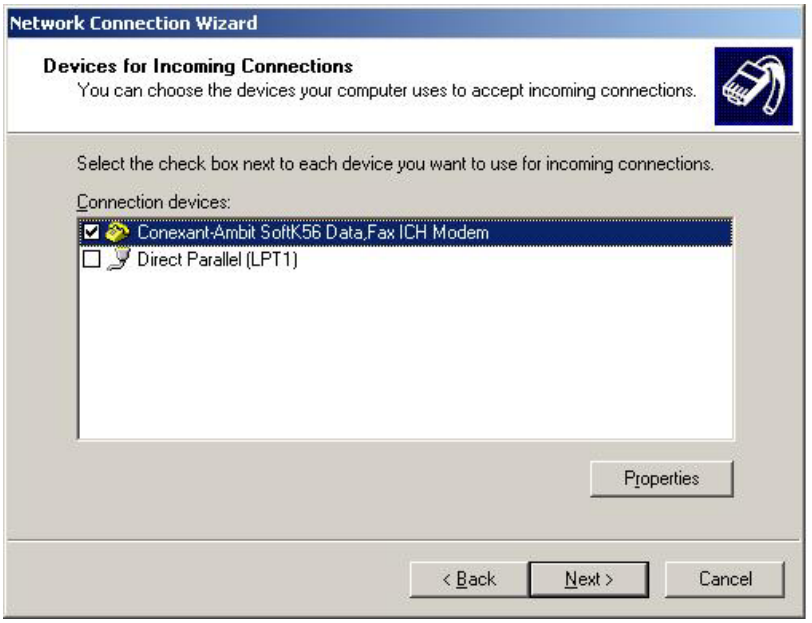
2. Choose 'Make a New Connection'


Network and Dial-up Connections
File Edit View Favorites Tools Advanced Help
Back Search Folders History
Address Network and Dial-up Connections
Go
Network and Dial-up Connections
Make New Connection
Local Area Connection
Make New Connection
The Network Connection wizard helps you create a new connection so that your computer can have access to other computers and networks.
1 object(s) selected

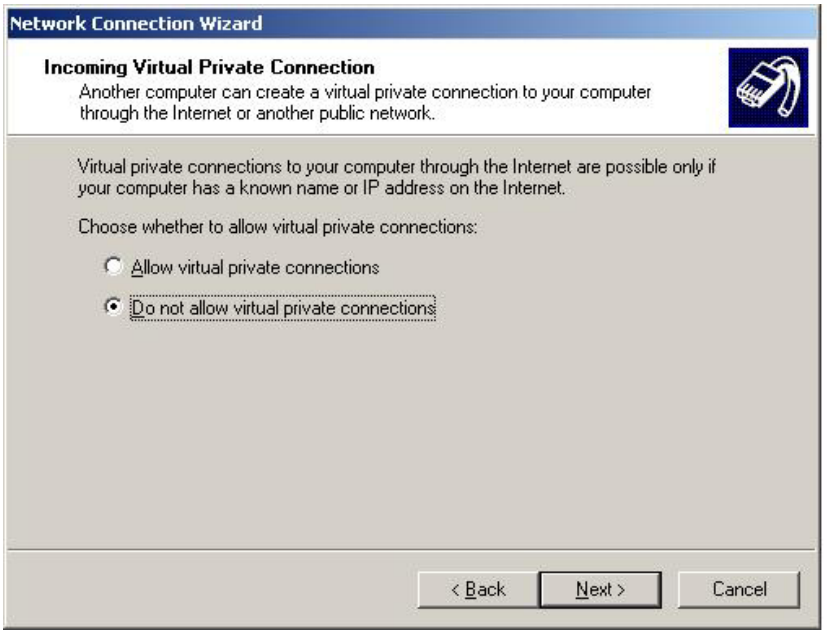
3. Choose ‘Accept Incoming Connections’


Network Connection Wizard
Network Connection Type
You can choose the type of network connection you want to create, based on your network configuration and your networking needs.
Dial-up to private network
Connect using my phone line (modem or ISDN).
Dial-up to the Internet
Connect to the Internet using my phone line (modem or ISDN).
Connect to a private network through the Internet
Create a Virtual Private Network (VPN) connection or 'tunnel' through the Internet.
Accept incoming connections
Let other computers connect to mine by phone line, the Internet, or direct cable.
Connect directly to another computer
Connect using my serial, parallel, or infrared port.
< Back
Next >
Cancel

4. Choose the device you could use in your computer. If devices installed correctly, All list are shows on the box


Network Connection Wizard
Devices for Incoming Connections
You can choose the devices your computer uses to accept incoming connections.
Select the check box next to each device you want to use for incoming connections.
Connection devices:
Conexant-Ambit SoftK56 Data,Fax ICH Modem
Direct Parallel (LPT1)
Properties
< Back
Next >
Cancel

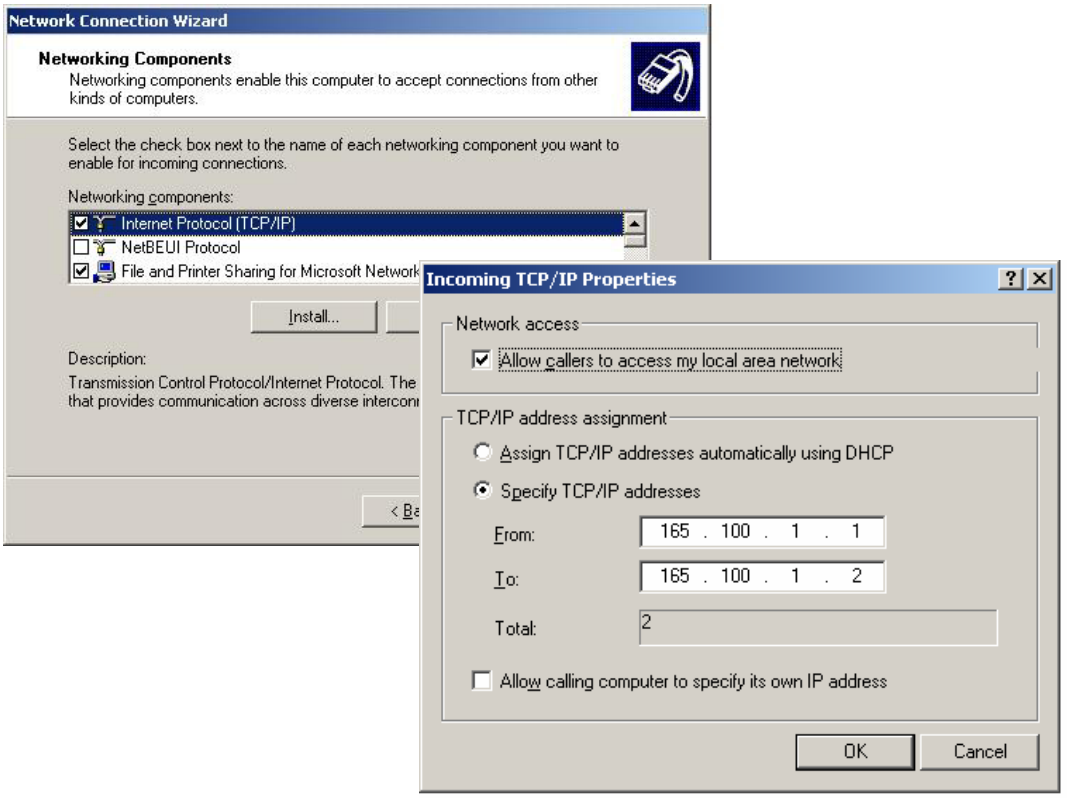
5. Choose ‘Do not allow virtual private connections


Network Connection Wizard
Incoming Virtual Private Connection
Another computer can create a virtual private connection to your computer through the Internet or another public network.
Virtual private connections to your computer through the Internet are possible only if your computer has a known name or IP address on the Internet.
Choose whether to allow virtual private connections:
Allow virtual private connections
Do not allow virtual private connections
< Back
Next >
Cancel

6. Add allowed users using ‘Add’ Button. User name must be “dvrsite”
- User name must be ‘dvrsite’.

Network Connection Wizard
Allowed Users
You can specify which users can connect to this computer.
Select the check box next to the name of each user you want to allow to connect to this computer. Note that other factors, such as a disabled user account, may affect a user's ability to connect.
Users allowed to connect:
Administrator
dvrsite
Guest
VUSR_SALES (VSA Server Account)
Add...
Delete
Properties
< Back
Next >
Cancel

7. After choose Network component, set the property correctly.


Network Connection Wizard
Networking Components
Networking components enable this computer to accept connections from other kinds of computers.
Select the check box next to the name of each networking component you want to enable for incoming connections.
Networking components:
Internet Protocol (TCP/IP)
NetBEUI Protocol
File and Printer Sharing for Microsoft Network
Install...
Description:
Transmission Control Protocol/Internet Protocol. The
that provides communication across diverse interconn
Incoming TCP/IP Properties
Network access
Allow callers to access my local area network
TCP/IP address assignment
Assign TCP/IP addresses automatically using DHCP
Specify TCP/IP addresses
From: 165 . 100 . 1 . 1
To: 165 . 100 . 1 . 2
Total: 2
Allow calling computer to specify its own IP address
OK
Cancel

8. Connection Wizard finished. Name the connection you made.

Network Connection Wizard
Completing the Network Connection Wizard
The connection will be named:
Incoming Connections
To create this connection and save it in the Network and Dial-up Connections folder, click Finish.
To edit this connection in the Network and Dial-up Connections folder, select it, click File, and then click Properties.
< Back
Finish
Cancel